

## INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week  
Gag of the Week  
Verse of the Week  
Add Russian Stories  
Hifalutin Home Economist  
Sports Corner  
Puzzle Contest  
Quote of the Week  
Have You Read It?  
Where Were You Born?

### Story of the Week

Columnist Malcolm Bingay of the *Detroit Free Press* walked into a bank on a quiet afternoon and found a girl teller reading a detective story.

"Good book?" he inquired.  
"Lovely. All about a bank robbery," she smiled.

### Gag of the Week

At 20 some men think they can save the world. At 30, they begin to wish they could save part of their salary.—*Journeymen Barber.*

### Verse of the Week

Breathes there a man  
That's so abnormal—  
He isn't titillated  
By a strapless formal?

### Add Russian Stories

"Those Russian delegates to the United Nations slay me," whimpered Margie, a UN steno.

"How come?"  
"If I drink vodka I can't say NO to anything."

Gromyko phoned the Kremlin after a United Nations session.

"What results did you obtain?" demanded The Boss.

"None, sir. But you will be proud of me. I prevented results."

"I asked for a steak," complained an emissary to Russia, "and you have served me a slice of automobile tire."

"Ah, yes," handrubbed a Leningrad restaurateur. "Over here automobiles have replaced horses."

"Color television may be progressing in England and France," beached a traveler to friends in the National Press Club bar, "but it's getting nowhere in the Soviet Union."

"Why?"  
"Because the Communists are so busy trying to prove that black is white they haven't gotten around to colors yet."

### Hifalutin Home Economist

A home economist was giving a cooking demonstration before a group of farm women. "Take an egg," she explained, "and carefully perforate the basal end. Duplicate the process in the apex. Then applying the lips to one of the apertures, and by forcibly exhaling the breath, discharge the shell of its contents."

Aunt Cassie, age 85, turned to a neighbor.

"Beats all how different these new-fangled ways is," she said. "When I was a girl, we just poked a hole in each end and blowed."—*Woodmen of the World Magazine.*

### Sports Corner

Reading the reports of the last Jersey Joe Walcott-Ezzard Charles heavyweight championship fight led to confusion. Quotes:

"I thought Charles won going away."—Tommy Devine, *The Detroit Free Press.*

"(Walcott) was the boss of the ring, when the trouble came. . . . A real champion."—Bill Corum, *INS.*

"A dreary 15-round exhibition . . . an inept match . . . boring pace."—Sam Greene, *The Detroit News.*

"It was an interesting fight."—Bob Murphy, *The Detroit Times.*

"Fight, Decision . . . Are Bad."—Headline in *The Detroit News.*

"I thought it was a good fight. A good decision."—Bill Corum.

"Some old-timers rate it with the dullest title bouts in history."—Tommy Devine.

(Concluded on Page 11, Column 1)

ISSUED EVERY MONDAY AT 450 W. FORT ST., DETROIT 26, MICHIGAN. ESTABLISHED 1926.



# AIR CONDITIONING & REFRIGERATION News

Vol. 66, No. 7, Serial No. 1213

June 16, 1952

Subscription Price, \$5 Per Year

Registered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879.

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## Freezer-Food Plans Run Into Government Red Tape; G-E States Stand on Program

### OPS Interprets Ruling On Tie-In Beef Sales

WASHINGTON, D. C.—Food plan operators who do more than merely act as an agent for collection or payment in connection with beef sales had better keep their strait jackets handy.

The Office of Price Stabilization has recently issued its interpretation of the pricing tangle involved in "sales of beef with freezers or refrigerators."

After emphasizing that sales of beef and freezers must be separate transactions, that the sale of beef cannot be conditional on the purchase of a freezer, that no charge for financing the beef can be made in excess of the ceiling price of the beef items, that only certain, wholesale cuts can be sold to consumers for which no charges may be made for wrapping, cutting, packaging, or processing, and that appliance dealers selling beef must comply with and keep records required by the beef regulation, the interpretation concludes:

"However, where an appliance vendor acts as an agent for collection or payment only, in connection with a sale of beef at retail, the transaction (Concluded on Back Page, Column 1)

## House Committee Votes To End Credit Controls; Senate Would Keep Them

WASHINGTON, D. C.—The House of Representatives Banking Committee has voted to terminate, on June 30, all credit controls.

However, the Senate version of the bill to extend the Defense Production Act would continue the credit controls section for another year.

Consumer credit controls are not in force now, but under the Senate version of the bill, the Federal Reserve Board would be empowered, for another year at least, to put such controls into effect whenever it was deemed necessary.

The House committee version would kill such powers, and would also put an end to Regulation X, which governs down payments and payment terms on real estate. Terms under Regulation X were recently relaxed, but most home building contractors termed the changes "disappointing."

## Philco Appoints Skinner, Otter, Vice Presidents

PHILADELPHIA—The appointment of James M. Skinner, Jr., as vice president-distribution for all domestic divisions of Philco Corp. was announced recently by James H. Carmine, executive vice president.

About the same time, John M. Otter, vice president and general manager of Philco's Refrigeration Div., announced the appointment of Albert J. Rosebraugh as sales manager of refrigeration.

Carmine said that Skinner will coordinate and have supervision over Philco field sales managers and division managers. He will be charged with the responsibility of maintaining a national flow of distribution adequate to fulfill the distribution, quota, and sales objectives of each division of the corporation, Carmine stated.

Skinner, who joined Philco in 1934 after attending the University of

(Concluded on Page 4, Column 3)

### G-E Will Not Sponsor Any Specific Food Plan

DETROIT—General Electric Co., as a manufacturer does not sponsor or recommend to its distributors any specific freezer-food plan promotion, according to A. T. Millott, sales manager of food freezers.

However, Millott said in a statement of policy on the plan, "we do not discourage our distributors and dealers from using a food plan promotion, nor do we discourage them from lining up food sources which will serve the freezer owner on a favorable basis."

"But, we recommend that they see a long-range viewpoint and recognize that a highly competitive business such as foods will meet the challenge of quantity purchases and serve freezer owners to the mutual advantage of both food and freezer outlets."

"In all cases, we advise our dealers to stay within the scope of sound legal advice and practice."

Millott said General Electric believes the freezer-food plan promotion "is a constructive means of selling food freezers since the very nature of the appliance indicates that food will be bought in quantities and at a favorable quantity price."

He continued: "We frown on use of the word 'wholesale' since it is a misnomer and indicates by-passing legitimate food channels."

"We believe that freezer owners are entitled to quantity discounts on large purchases of food and many (Concluded on Back Page, Column 4)

## NARDA Lists Program For Mid-Year Meeting

CHICAGO—Additional speakers for its mid-year meeting have been announced by the National Appliance & Radio-TV Dealers Association.

The meeting will be held for both members and non-members during the forepart of the second week of the summer furniture market, June 22-24, at the Hotel Sherman.

Plans for a national campaign for one basic line of television receivers and appliances from each manufacturer a year will be outlined at the meeting.

"Knowledge that today's purchases will not be obsolete four to seven months from now will make it easier for dealers to buy quantities with (Concluded on Page 21, Column 1)

## Admiral Guarantees List Prices on Refrigerators

CHICAGO—Admiral Corp. announced it will guarantee present list prices on all its refrigerators until August 31.

At the same time, Ross D. Siragusa, president, said May refrigerator sales were up 14.6% over the same month in 1951.

He also announced a major expansion program at the company's Midwest Mfg. Corp. subsidiary at Galesburg, Ill., which will consolidate the production of all Admiral refrigerators at that plant in the fall. At present some Admiral refrigerators are produced by another company.

"We had no 1951 units left at the beginning of the year," Siragusa said. "Production in 1952 was geared to meet the demand and today we are short in four basic models. We are trying to rearrange production schedules to remedy the situation."

## G-E Reduces 3 '52 Refrigerators

LOUISVILLE, Ky.—Price adjustments ranging from \$10 to about \$27 on three 1952 model refrigerators were announced recently by the General Electric Co.

W. M. Timmerman, general manager of the household refrigerator department, said the reductions were made to bring the models into better balance with the rest of the line.

Price adjustments announced were the NC-6J to \$199.95 from \$209.95, the LD-8J to \$269.95 from \$279.95, and the LF-8J to \$329.95 from \$356.50.

## NARGUS Convention Set for June 22-26

CHICAGO—As of a recent date, 14 refrigeration and air conditioning companies had reserved display space for the food products and equipment exhibition to be held in conjunction with the 53rd annual convention of the National Association of Retail Grocers.

The convention and exhibition will be held in Miami June 22-26. All business sessions and the exhibition will be at Dinner Key Auditorium.

NARGUS said it is planning to make the convention a virtual "clearing house" of the latest information and ideas in efficient food store operation. All meeting sessions will be "completely retailer dominated," according to the association.

Official opening of the exhibit is set for 11 a.m. on Sunday, June 22. Exhibit hours were announced as follows: June 22—11 a.m. to 5:30 p.m.; June 23—10:30 a.m. to 5:30 p.m.; June 24—10:30 a.m. to 12:30 p.m.; June 25—10:30 a.m. to 5:30 p.m.; June 26—10:30 a.m. to 1:30 p.m.

Refrigeration and air conditioning exhibitors signed up thus far include Airtemp Div., Chrysler Corp.; Bally Case & Cooler Co.; Fogel Refrigerator Co.; C. V. Hill & Co.; Hussmann Refrigeration, Inc.; International Harvester Co.; McCray Refrigerator Co.; Maintain Store Engineering Service; Nolin Mfg. Co.; Pinnacle Equipment Corp.; Tyler Fixture Corp.; Typhoon Air Conditioning Co., Inc.; Victor Products Corp.; and Warren Co.

The convention will open officially (Concluded on Page 21, Column 3)

## NEMA Freezer Sales Drop During First Quarter

(See table on page 4)

NEW YORK CITY—In the first three months of this year, before the advent of the freezer-food plans, sales of home farm freezers by 24 firms reporting to the National Electrical Manufacturers Association, fell 32% under those of the same quarter in 1951.

Figures released by NEMA showed 146,618 units sold this year as compared with 213,641 sold last year.

February sales were down 22%—from 63,996 units to 50,127 units.

In March, 1951, NEMA reported its highest monthly freezer sales volume in history—77,937 units—a mark that has remained unchallenged since. In the same month this year, only 52,344 units were sold, representing a decline of 33%.

Though these figures fall short of last year's high selling quarter, they are better than any previous first quarter, a study of the older figures has revealed.

Foreign sales, though down from last year, are off only slightly. For the three months, they dropped from 3,564 to 3,187. March figures were 1,480 in 1951 and 1,277 this year.

## Hotpoint Plans To Produce Own '53 Refrigerator

Will Have Separate Line Of Appliances; Slight Name Change Due as G-E Div.

CHICAGO—Hotpoint Inc. this fall will begin retooling its defense factory at 54th Ave. and 10th St., Cicero, for production of a new line of Hotpoint refrigerators, with pilot runs scheduled for June, 1953, John C. Sharp, president, announced.

Sharp also announced that effective June 30, the firm's name will be changed to Hotpoint Co., as a division of General Electric, the parent firm, rather than an affiliate.

However, Hotpoint will continue to function as an independent Chicago company, with its own complement of officers, dealing with Chicago banks and other organizations as in the past. Hotpoint will develop a separate and distinct line of appliances, and Sharp indicated that it might differ as much as possible from G-E's lines.

Hotpoint's present defense factory contains approximately 1,000,000 sq. ft. of manufacturing space, and is currently producing jet engine components for the U. S. Navy.

Sharp said that at the Navy's request, Hotpoint will continue to manufacture jet components permanently in this factory, although the bulk of the manufacturing space will be made available for refrigerator output. Hotpoint refrigerators are now manufactured in an eastern factory.

Meanwhile, plans to erect a refrigerator factory at a 400-acre site at 95th St. and Harlem Ave., purchased last year, will be temporarily shelved. However, the company plans to retain this property for possible future industrial expansion.

"It is more expedient to use the existing facility than to build a new one," the company pointed out. "Construction and tooling a new factory would require at least two years."

Sharp explained that the decision to retool the Cicero facility for refrigerator manufacturing was reached after a careful study of the needs of the national defense program.

Originally designed for refrigerator (Concluded on Page 4, Column 1)

## Try To Push Fair Trade Bill Before Congress Dies

WASHINGTON, D. C.—The clock may be running out on the McGuire bill, the measure restoring teeth to state fair trade laws.

The bill has been approved by the House of Representatives, but the problem is to get it to the floor of the Senate before the 82nd Congress adjourns.

The bill is in the hands of the Senate Interstate and Foreign Commerce Committee, but Sen. Pat McCarran (Nev.) threw a stumbling block in the path of the bill when he asked that the Senate Judiciary Committee, which he heads, be given a look at the bill.

The National Association of Retail Druggists and other retail groups favoring the measure are attempting to bring all possible senatorial support to get the measure on the Senate floor.

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## California Contractors Ask:

### Why Did Manufacturers' Agents Compete With Them on Convair Job at Pomona?

LOS ANGELES — Why should manufacturers' agents want to compete with the air conditioning contractors with whom they do business?

That is the question which a special committee of the Refrigeration and Air Conditioning Contractors Association of Southern California, Inc. wants to get answered. It intends to meet with the manufacturers' agents to find out.

The investigation was prompted, according to Henry B. Ely, association executive secretary, by the "Convair job at Pomona." There the general contractor broke down the air conditioning system into its component parts and requested separate bids for various pieces of equipment—centrifugal units, fans, heating and cooling coils, ceiling outlets, boilers, pumps, and steel—with a separate request for the labor bid.

"Many well known manufacturers and their agents bid for the equipment," said Ely, but "manufacturers of steel and controls refused to rise to the bait."

The committee first sent a protest to Capt. A. I. Flaherty, public works officer of the 11th Naval District. Capt. Flaherty replied, saying:

"It is the Navy Department's policy to utilize open competitive lump sum contracts to provide complete usable facilities when the circumstances of the project do not dictate otherwise. In the case of the air conditioning under NOrd-F-1492

(Convair job) it was determined that the limitations on this project required a deviation from the normal procedure.

"Your interest in the Navy's public works construction is appreciated and you may rest assured that it is the desire of the Navy Department and of the District Public Works Office to operate in accordance with accepted construction practice whenever possible."

This answer did not satisfy the committee, however, Ely said. It replied, in part:

"Unless it is 'top secret' we would appreciate knowing what circumstances required a deviation in this case. We recognize that always there may be exceptions to the rule but we have been instructed to exhaust every procedure in ascertaining why the bid on this air conditioning job was broken down into its component parts and let separately."

The committee also queried Don Shaw, manager of the general contractors association. Shaw told them that the matter would be considered by the group's board of directors. He added that from his conversations with manufacturer's agents in the air conditioning field they do not bid direct on private work.

"We still have to find out why some make a distinction between private and public work," Ely declared.

"Another field still to be reviewed is the effect of the Robinson-Patman Act which forbids discrimination in price between purchasers. How come the same manufacturer can sell at a low price to another manufacturer and sell the same article in the same quantity for progressively higher prices to distributor, wholesaler, dealer, and owner?"

"Perhaps this practice may account for that well worn phrase, 'I can get it for you wholesale.'"

## NPA Helps Copper, Brass Distributor Stocks

WASHINGTON, D. C. — Distributors of brass mill or copper wire mill products are now permitted to extend customers' rating identifications to replace material they took from inventory to fill military, Atomic Energy Commission, or Z-2 priority orders, the National Production Authority announced recently.

This action was taken in amendments to orders M-82 and M-86 to enable these distributors to compete successfully at the mill level for replacement material and shorten lead time on small orders by those holding the above mentioned priorities. This will, in turn, aid small manufacturers, NPA said.

The amendments also provide for greater flow of dormant materials back into normal channels by permitting distributors to apply the X-6 symbol for purchase of surplus materials.

## La Crosse Offers Optional 5-Year Warranty Plan

LA CROSSE, Wis. — Arrangements have been completed to offer purchasers of La Crosse Cooler Co. equipment an optional 5-year warranty at small additional cost, the company announced.

The warranty is applicable on condensing units installed in La Crosse equipment at the factory.

"Experience has indicated," the company said, "that not all buyers prefer a 5-year warranty. Therefore, the La Crosse dealer, because of the optional arrangement, has available a sales program of greater flexibility to meet requirements of the buyer."

Specific details are available by writing to La Crosse Cooler.

## 'Tag Hunt' Clears Out Leftover Stock

NIAGARA FALLS, N. Y. — Inviting refrigerator prospects to "hunt for values" by checking colored "savings" tags brought record traffic recently into Levy Bros., Frigidaire dealership here.

Shoppers were informed that the color of the tag hanging on each refrigerator shown indicated the savings which could be realized. All boxes with white tags showed a 10% reduction on regular sale price, green tags 20%, gold tags 30%, blue tags 40%, and red tags 50%.

The promotion lasted three days, and was utilized to clear out leftover 1951 refrigerator models and reconditioned appliances.

## RACCA Members Report Average Volume of \$250,000 During 1951

NEW YORK CITY — Volume of business done in 1951 by members of the Refrigeration & Air Conditioning Contractors Association who responded to a questionnaire averaged \$250,000 per member, the association reported.

About 41% of the members answered the questionnaire, RACCA said.

"From this sampling, the final gross amount was found to be \$91,000,000 a year," the association stated. "This information will be most enlightening to those persons who still think the refrigeration and air conditioning business is still in its infancy."

## Shreveport Distributor Moves

SHREVEPORT, La. — Frees, Inc., commercial refrigeration and air conditioning distributor, recently moved to its new location at 2531 Samford Ave. The firm is headed by Walter G. Free, president.

## AIR CONDITIONERS

3 to 50 Ton Units complete with evaporative condensers

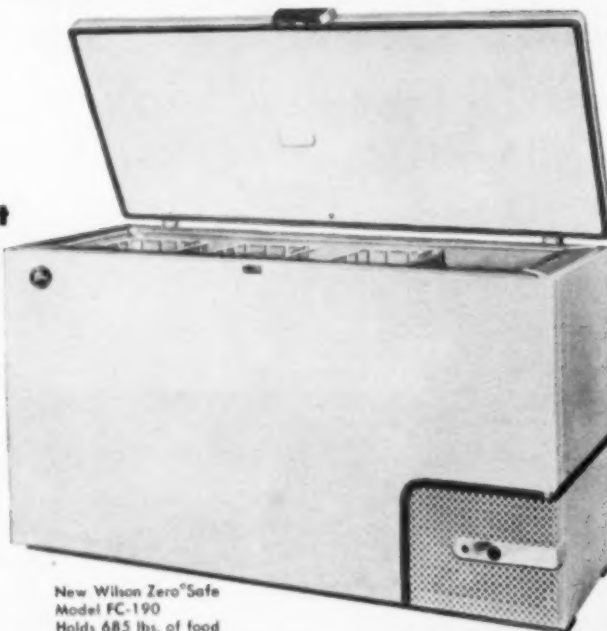
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P. O. BOX 578  
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# STILL ANOTHER ADDITION TO THE WILSON FREEZER LINE

**NEW, POPULAR  
SIZED 19 cu. ft. Chest**

**HAS EVERY FEATURE  
For Fast, Easy Sales**

- ★ large fast freeze compartment
- ★ all steel and aluminum construction
- ★ automatic warning light
- ★ interior light
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- ★ 5-year food spoilage warranty available.



New Wilson Zero° Safe  
Model FC-190  
Holds 685 lbs. of food

You've heard big things were happening at Wilson. Here's proof . . . another new chest freezer with so many features that sales are bound to hit new highs.

If you're looking for a freezer line that you can go places with—look into Wilson. A few desirable distributor franchises still available. For information, write, wire or phone

**WILSON**  
REFRIGERATION, INC.

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Smyrna, Delaware

HOME FREEZERS • FARM MILK COOLERS • COMMERCIAL REFRIGERATION

## OTHER WILSON FREEZERS

The Wilson line of home freezers is one of the most complete lines ever offered by a single manufacturer and includes:

- 4 CHEST MODELS  
8, 15, 19, 24 cu. ft.
- 4 UPRIGHT MODELS  
15, 18, 23, 30 cu. ft.
- 9 UPRIGHT MODELS (SECTIONAL)  
30, 60, 90 cu. ft.



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GLASS  
PANELS**

"DISPLAY ALL" sliding glass panels combine beauty, utility and sanitation in open top case to cutting room partitions. These smart new sliding panels are available, custom built to your requirements. Complete and ready for easy installation.

Frames and guides are highly polished, heavy extruded aluminum. Ball bearings and cushion rubber stops assure noiseless operation . . . choice of many types of glass or mirrors.

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**Trade 'Em or Buy 'Em****Visitors to Trade-In Show See What Their Appliances Are Worth**

HEMPSTEAD, N. Y.—Appliance sales were stimulated for a Long Island chain when it staged an unusual "Trade-In Show" which gave visitors a pretty good idea of what they might expect in trade for their used appliances.

The show was held at the Hempstead Armory by the Westminster appliance stores. It followed the Hempstead Home Show at which Westminster had a booth.

Noting the high interest of most booth visitors to trade-in allowances, Emmons Moser, head of the chain, hit on the idea of renting the Armory for a follow-up trade-in show.

Taking over most of the Armory for the event, the Westminster stores showed their complete lines of major appliances, package air conditioners, television, model kitchens and laundries, etc.

In addition, there were displayed at every booth typical examples of trade-ins which customers had used as down-payments on new appliances. Atop each used appliance was a sign telling the allowance offered on it on the purchase of a new product.

The used appliances were on sale as well as the new ones. But the important point was that the displays showed householders just about what their old appliances would be worth when traded-in.

Some 30 salesmen from the various Westminster stores were on hand. Traffic and response exceeded expectations, according to Moser.

**Arkansas May Require Water Re-Use for Air Cooling, Refrigeration**

LITTLE ROCK, Ark.—The state Public Service Commission has taken under advisement a request from General Waterworks Corp. of Pine Bluff that the PSC establish rules requiring owners of air conditioning and refrigerating units to re-use their water or pay a special rate over their normal water requirements.

However, the commission indicated that the corporation should meet the problem by establishing rules of its own and filing a schedule of rates to supplement the rules.

General Waterworks operates the water systems in 11 Arkansas communities. Witnesses for the company said widespread use of air conditioning and refrigerating units "conceivably could endanger the domestic water supplies of some communities."

The company's application pertained to all air conditioning units of 5-ton or more capacity.

In Pine Bluff, Mayor George H. Steed said the city council has adopted a resolution favoring regulation of air conditioning units.

**SALES MANAGER**

Well established, nationally known manufacturer of commercial refrigeration equipment desires manager of sales to direct and supervise a now established sales organization, contacting wholesale ice cream and dairy industry. Experience in refrigeration and a knowledge of the ice cream industry helpful. Excellent opportunity. State experience, age, qualifications, references. All replies confidential.

Box 4026, Air Conditioning & Refrigeration News

**AIRO** stands for

Complete stock of Refrigeration-Air Conditioning parts and supplies.  
Speedy, dependable service when you need it... wherever in the world you want it.  
New! Sectional Catalog saves you time. Write for your FREE copy, today!

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**Window Air Conditioners Put Into 23 Suites Of N. Y. Hotel**

NEW YORK CITY—Residents of 23 deluxe suites of the Town House hotel, Park Ave. and 38th St. here, will be able to beat New York's sultry summer heat because of  $\frac{1}{2}$ -hp. window-type room air conditioners installed during the hotel management's recent renovation program.

According to officials of Dwight-Helmley, Inc., manager of the 24-story hotel, the 23 units, products of Mitchell Mfg. Co., represent the first group of installations with others to follow. Another feature of the renovation program was the installation of built-in television sets.

Installation of the Mitchell units was supervised by Malcolm Reybold, Inc., Mitchell distributor in the central New York City area, and air conditioning consultant for many large New York buildings. Assisting as adviser was Al Neuberg, Mitchell sales representative for the Greater New York area.

**Refrigerator, Freezer Mfrs. Must File Form 128 To Establish New Ceilings**

WASHINGTON, D. C.—Manufacturers of household refrigerators and home and farm freezers must file Public Form 128 in reporting newly established ceiling prices for products they did not sell between July 1, 1949 and June 24, 1950, the Office of Price Stabilization announced recently.

In amendment 47 to CPR 22, which became effective on June 9, the agency said that manufacturers of vented and unvented circulating space heaters (oil, gas, electric, or coal fire); gas logs; portable utility room heaters; and portable radiant heaters (gas or electric) must also file this form.

Manufacturers of automatic temperature controls are exempted. This amendment is intended to clarify a previous order exempting manufacturers in certain fields from filing Public Form 128.

**April Freezer Sales Set Record In West Penn Area**

PITTSBURGH—April freezer sales by southwestern Pennsylvania dealers were the highest of any April on record, the West Penn Power Co. reported recently. Dealers in its territory sold 209 freezers in April as compared with 197 a year ago.

Room coolers and vacuum cleaners were the only other appliances to show a gain over last year, the utility's report showed. Dealers sold 16 room coolers this April as compared with four last year and 664 vacuum cleaners as compared with the 598 in April, 1951.

All other major appliances sold in less volume this year.

Appliance	April 1952	April 1951
Refrigerators	1,219	1,353
Ranges	701	816
Garbage disposers	27	37
Dishwashers	41	57
Clothes driers	185	190
Ironers	106	162
Auto. washers	316	390
Conv. washers	966	1,220
Water heaters	304	427

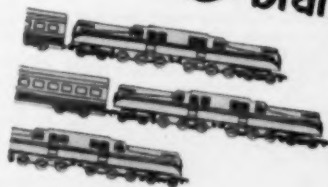
**Room Air Conditioners Offered for \$10 Down**

PHILADELPHIA — "Satisfactory" response was reported by Gimbel Bros. here to an offer of room air conditioners for a down payment of \$10.

A newspaper advertisement promoted a Philco  $\frac{1}{2}$ -ton unit at \$229.95, a Carrier  $\frac{1}{2}$ -ton model at \$239, and a Frigidaire  $\frac{1}{2}$ -ton unit at \$329.75. The store said it would deliver an air conditioner after the down payment with an additional cost for installation. Gimbel's budget charge was included in advertised prices.

**Snakard Heads Appliance Sales of Electric Supply**

CHICAGO—L. B. Mangione, president of Electric Supply Corp. of Chicago, has announced the appointment of Charles D. Snakard as appliance sales manager. Snakard will also supervise appliance sales of Electric Supply Corp. of Wisconsin at Milwaukee and Electric Supply Corp. of Indiana at Hammond.



## 3 brand-new Pennsylvania trains with a special air about them



Now three wonderful new Budd-built Pennsylvania Railroad luxury streamliners—the Morning Congressional between Washington and New York, the Senator between Washington, New York and Boston, and the Afternoon Congressional between Washington and New York. These smart trains offer passengers every advantage known to modern railroading—safety, beauty, comfort, convenience, speed. And, it must be added, complete Frigidaire air conditioning.

Frigidaire equipment—made by the world's largest makers of railway air conditioning equipment—sets a splendid new standard of passenger-pleasing dependability. Every rider in the 64 new cars making up these splendid trains benefits from the overall comfort provided by Frigidaire—even in ways not apparent to the casual passenger.

For full information about Frigidaire railway air conditioning, refrigeration, and electric generating equipment, write Frigidaire Division of General Motors, Dayton 1, Ohio.

## FRIGIDAIRE

World's largest maker of railroad air conditioning units



Frigidaire air conditioning apparatus is used here the most successful road

**You've got to know your business to build railroad air conditioning!**

Frigidaire, pioneer of air conditioning for railroad passenger cars, is the world's largest maker of equipment for this purpose. The know-how that enables Frigidaire to meet the super-exacting requirements of railway service is clearly reflected in more salable air conditioning products for Frigidaire Dealers—and in greater satisfaction for Frigidaire users.



## Hotpoint To Produce Own Appliances--

(Concluded from Page 1, Column 5) for production, this plant was altered before its completion to supply components under a contract with the Pratt & Whitney Div. of United Aircraft Corp. for J-48 jet engines. Recently, the government's rescheduling of defense contracts resulted in reducing total quantities of certain types of jet engines needed by the Navy.

Sharp said the large factory, which was designed as an automatic counterpart to the company's electric range factory across the street, provides facilities for substantial civilian output as well as a continuation of defense work.

He said Hotpoint's jet engine schedules are now tapering off, and by fall will have reached the point where retooling for refrigerators can begin.

At present, under a reciprocal manufacturing arrangement, the big Hotpoint stove factory is also producing General Electric ranges. When the separation of the two firms is complete, this space will be available exclusively for Hotpoint production. General Electric range manufacture will be moved to Louisville.

With its own refrigerator facility in the Chicago area, Hotpoint will be in a better competitive position on this appliance, Sharp said. This arrangement will permit integration of engineering, manufacturing, and production services that have been centralized in the Chicago areas. It will also permit carload shipments of appliances to dealers from the source of manufacturing.

Hotpoint will manufacture all parts

for the refrigerators at the plant which is presently engaged in defense work.

The factory was designed originally for integrated manufacture with the electric range factory, and was set up so that it could quickly switch from civilian to defense work, or vice versa, in keeping with the nation's requirements. The two factories are connected by conveyorized overpasses which permit fabrication operations to be carried on in one plant, and assembly functions in the other.

The refrigerator factory has shipping facilities that can accommodate 35 railroad cars daily. It is expected that when the factory reaches rated production of refrigerators, the company will employ an additional 2,000 persons.

Sharp explained that initially, employees would be transferred from declining defense work, but that later on it would be necessary to go to outside sources and hire additional employees.

Production of the refrigerator factory will be in excess of 350,000 units a year.

The official said a new defense factory built by Hotpoint at Milwaukee will continue to manufacture turbo-superchargers under a contract that runs into 1954. The turbo-superchargers are being supplied to the Air Force for use on propeller-driven military aircraft such as the B-36 intercontinental bomber, and the C-97 Globemaster.

Civilian operations at Milwaukee include manufacture of automatic dishwasher, electric water heaters, and food disposals.

## Philco Appointments--

(Concluded from Page 1, Column 2) Pennsylvania, has been for the past year, vice president-sales of the Refrigeration Div.

Previously, he served successively as general sales manager of the Refrigeration Div., special assistant to the vice president of merchandising, and then as manager of the sales statistical department.

When the Accessory Div. was formed in 1940, he was named sales manager and in 1945 was made general manager of this division, after helping to direct the Philco Training School on radio, radar, and electronics during World War II. In 1948, he was named vice president-service and parts division.

Rosebraugh joined Philco in 1929. He has served successively as a salesman and sales manager of Philco Distributors, Inc., in Chicago; as a Philco district representative; division manager; manager of car manufacturers in Detroit; sales manager of radio in Philadelphia, and manager of distribution in Philadelphia.

## M-H Appoints Three Industrial Managers

MINNEAPOLIS—Three new branch office industrial managers have been named for the Industrial Div. of Minneapolis-Honeywell Regulator Co., it was announced recently by O. B. Wilson, field sales manager.

Robert M. Woodside was appointed branch industrial manager at Cleveland, John O. Pauli, in Los Angeles, and Lee Applin in San Francisco.

## NEMA Home Freezer Sales Total 52,344 For March, 146,618 In 3 Months

Summary for March and First Three Months, 1952

Electric Farm and Home Freezers—Complete—Sales by Sizes—Units

Farm and home freezers complete with high and low side and cabinet, where 50% or more of the net cabinet capacity is designed for the freezing and/or storage of frozen foods.

MARCH (24 Companies)				
Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under...	994	—	—	994
2. 5.0 to 6.9 cu. ft. ....	4,784	—	333	5,117
3. 7.0 to 8.9 cu. ft. ....	8,073	86	157	8,316
4. 9.0 to 10.9 cu. ft. ....	2,979	4	76	3,059
5. 11.0 to 12.9 cu. ft. ....	11,501	280	236	12,017
6. 13.0 to 16.9 cu. ft. ....	16,319	5	73	16,397
7. 17.0 to 20.9 cu. ft. ....	4,222	2	20	4,244
8. 21.0 to 29.9 cu. ft. ....	2,111	2	3	2,116
9. 30.0 to 39.9 cu. ft. ....	82	—	—	82
10. 40.0 to 49.9 cu. ft. ....	—	—	—	—
11. 50.0 to 59.9 cu. ft. ....	—	—	—	—
12. 60.0 cu. ft. and over...	2	—	—	2
<b>Total—All Models</b> .....	<b>51,067</b>	<b>379</b>	<b>808</b>	<b>52,344</b>
FIRST THREE MONTHS (24 Companies)				
Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under...	1,948	—	—	1,948
2. 5.0 to 6.9 cu. ft. ....	6,581	—	603	7,184
3. 7.0 to 8.9 cu. ft. ....	17,380	336	590	18,306
4. 9.0 to 10.9 cu. ft. ....	10,397	5	258	10,660
5. 11.0 to 12.9 cu. ft. ....	37,557	545	420	38,522
6. 13.0 to 16.9 cu. ft. ....	47,324	124	210	47,658
7. 17.0 to 20.9 cu. ft. ....	14,663	18	65	14,746
8. 21.0 to 29.9 cu. ft. ....	7,275	2	11	7,288
9. 30.0 to 39.9 cu. ft. ....	298	—	—	298
10. 40.0 to 49.9 cu. ft. ....	—	—	—	—
11. 50.0 to 59.9 cu. ft. ....	—	—	—	—
12. 60.0 cu. ft. and over...	8	—	—	8
<b>Total—All Models</b> .....	<b>143,431</b>	<b>1,050</b>	<b>2,157</b>	<b>146,618</b>
<b>13. Total Upright Models (Included in above)</b> .....	<b>4,417</b>	—	—	<b>4,417</b>

Participating companies: Avco Mfg. Corp.; Ben-Hur Mfg. Co.; Carrier Corp.; The Coolerator Co.; Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Masterfreez Home Locker Mfg. Co.; The Maytag Co.; Norge Div., Borg-Warner Corp.; Philco Corp.; Refrigeration Div., Revco, Inc.; Sanitary Refrigerator Co.; Schaefer, Inc.; Seeger Refrigerator Co.; Emil Steinhart & Sons, Inc.; Victor Products Corp.; Westinghouse Electric Corp.; and Wilson Refrigeration, Inc.

# Clearing The Way

**WEIGHTY PRODUCTION PROBLEMS** are not easily swept away. Careful calculation by experienced minds is often required before the right type of tubing for a specific job can be determined.

The Penn team, all working together, produces tubing that is always in line when it comes to tight requirements. Consistently clean, bright, uniform in wall thickness and annealed to specifications, Penn seamless tubing is quality controlled from draw bench to shipping department.

Production men everywhere have learned that Penn tubing gives production a clear road ahead. Write Penn for new specs and charts. Penn men can help you outdistance the field with a winning margin. Remember, Penn tubing is *first in quality*.

QUALITY TUBING HAS A "PENN NAME"



**PENN BRASS & COPPER COMPANY**  
ERIE • PENNSYLVANIA • TELEPHONE 3-1164

## FINE HOTELS DEMAND FINE REFRIGERATION

*The world renowned Caribe Hilton Hotel, famous for its excellent cuisine, insists on McCall refrigerators*

**The Caribe Hilton**, one of the newest additions to the world-renowned Hilton organization, whose hotels are famous for their excellent cuisine—selected four McCALL Stainless Steel Reach-ins (models 115, 92, 70, 45) for its modern, spotless kitchens. McCALL was chosen for its versatility and built-in extras—durability—beauty—convenience—economy—all of which are necessary for maintaining the high efficiency of a Hilton Hotel restaurant. The Caribe Hilton, in choosing McCALL, knew that proved quality was its only assurance of economy and service.

**McCall Versatility**—McCALL is the only manufacturer in the industry who offers you a choice of three different finishes on all models: 1. genuine Dulux enamel, both durable and attractive—2. gleaming lifetime porcelain, baked in the McCALL furnace to insure a unit of character and uniform McCALL quality—3. the master choice of all; our heavy 18 gauge stainless steel with its high #4 polish—a true aristocrat. These finishes can also be used in conjunction with each other. Ex: any McCALL pass-thru can be constructed with one front stainless steel, the other Dulux or porcelain.

**All Welded** one-piece interiors in units 15 cubic feet through 70 cubic feet.

Limited number of territories available to qualified firms.  
Write for information.



**REFRIGERATOR CORPORATION**  
Hudson, N. Y.



## Dehumidifiers Go to NPA Consumer Durables Div.

WASHINGTON, D. C.—Dehumidifiers with complete refrigeration cycle will be governed by the consumer durable goods division of the National Production Authority beginning with the fourth quarter of this year, the NPA announced recently.

They are currently under the jurisdiction of the general industrial equipment division.

Being transferred from this division to the service equipment division, effective with the fourth quarter, are the following products:

Bottled beverage coolers of the mechanical and non-mechanical type, whether coin-operated, dry, or wet.

Drinking water coolers of the mechanical or non-mechanical type, both bottled and pressure types.

Coin operated bulk beverage dispensers.

Refrigerated florist cabinets.

Refrigeration repair parts.

Water coolers, drinking.

## Amana To Sponsor Daily Radio Show over Mutual

NEW YORK CITY—A new daily Mutual network "Paula Stone Show" which starts Monday, June 9, will be presented Mondays, Wednesdays, and Fridays by Amana Refrigeration, Inc., according to the Mutual Broadcasting System.

Broadcast time of this behind-the-Hollywood-scenes feature is to be announced.

Miss Stone has spent a lifetime on the stage, first as a vaudevillian, then as film star, radio celebrity, and successful Broadway producer. She and her husband, Michael Sloane, produce the comedy hit "Top Banana."

For her new series, Miss Stone plans to tell the intimate Hollywood stories she knows first-hand, highlighting these reports with on-the-air interviews of filmland's celebrities.

## Doidge Leaves NPA for Post with Hamilton Mfg.

WASHINGTON, D. C.—Edward F. Doidge has resigned from the National Production Authority to join the Hamilton Mfg. Co., it was reported here recently.

Doidge was an industry analyst in home laundry equipment in NPA's electrical appliances and specialty products branch, consumer durable goods division.

## Jewett Pres. Dies

BUFFALO — Edgar Boardman Jewett II, president of the Jewett Refrigerator Co., Inc., died May 30 at his home. The 57-year-old was also vice president of Ruslander & Sons.

He and his family for more than 100 years have been in the business of refrigeration—from the porcelain-lined iceboxes of the 19th century to major installations in large buildings today.



evaporator problem?

solve it with

**RUDY**

mild steel

**EVAPORATORS**

Across-the-top or U types... mild steel... galvanized... super finished... standard models... prompt service... low cost.

WRITE FOR DETAILS

**RUDY Manufacturing Co.**

Specialists in  
Manufacturing Evaporators and Condensers  
DOWAGIAC, MICHIGAN

## Rice Business College Installs Room Coolers

CHARLESTON, S. C.—Charles E. Palmer, president of Rice Business College, has announced that individual room air conditioning units have been installed in the college's new quarters at 73 Wentworth St. The school is preparing to open its 42nd summer term on June 16.

Palmer said Rice is the only completely air-cooled school in the state.

## Excise Collections on Coolers, Refrigerators Down in April

WASHINGTON, D. C.—Excise taxes paid in April by manufacturers of mechanical refrigerators, air conditioners, etc. totaled \$6,546,217, compared with \$7,838,528 for the same month a year ago, according to the Internal Revenue Bureau.

In the period from July 1, 1951, to April 30, 1952, these manufacturers paid excise taxes amounting to \$46,683,839, against \$75,029,778 in the like 1950-51 period.

## Deepfreeze Sponsors Gabriel Heatter Newscast

N. CHICAGO, Ill.—Deepfreeze Appliance Div. of Motor Products Corp. will sponsor Gabriel Heatter, famous news commentator, on the full, 534-station network of Mutual Broadcasting System, Ben G. Sanderson, general sales manager, announced.

Starting on Thursday, June 26 at 7:30 p.m., eastern daylight savings time, the program will continue on Thursday evenings at that hour for 52 weeks. The Heatter show will be heard on central time belt stations at 6:30 p.m.

Mountain state and Pacific Coast stations will carry the program at 6 p.m., local time, every Thursday.

## Firm To Make Fixtures

RALEIGH, N. C.—The secretary of state has issued a charter to Southern Fixture Mfg. Co., Inc. of Greensboro, N. C., which proposes to manufacture and market all kinds of commercial refrigeration and equipment.

## Chicago Better Business Bureau Labels 'Treasure Chest' Promotion a Lottery

CHICAGO—A "key to the treasure chest" promotion for Raytheon television sets, sponsored locally by Belmont Distributors, Inc., was recently classified as a lottery by the Chicago Better Business Bureau.

Both Belmont and Raytheon's advertising agency—Henry Hurst & McDonald, Inc.—agreed to discontinue any further advertising featuring the idea, the BBB said.

It explained that "Raytheon dealers were being furnished small keys to send to prospective customers by mail. Recipients would then have to take them to dealers' showrooms and, if a prospect held a lucky key which would open the treasure chest padlock, he or she would be entitled to a choice of valuable prizes contained therein."

The BBB also reported that it has stopped advertising on two other local lottery promotions and has issued a "not in the public interest"

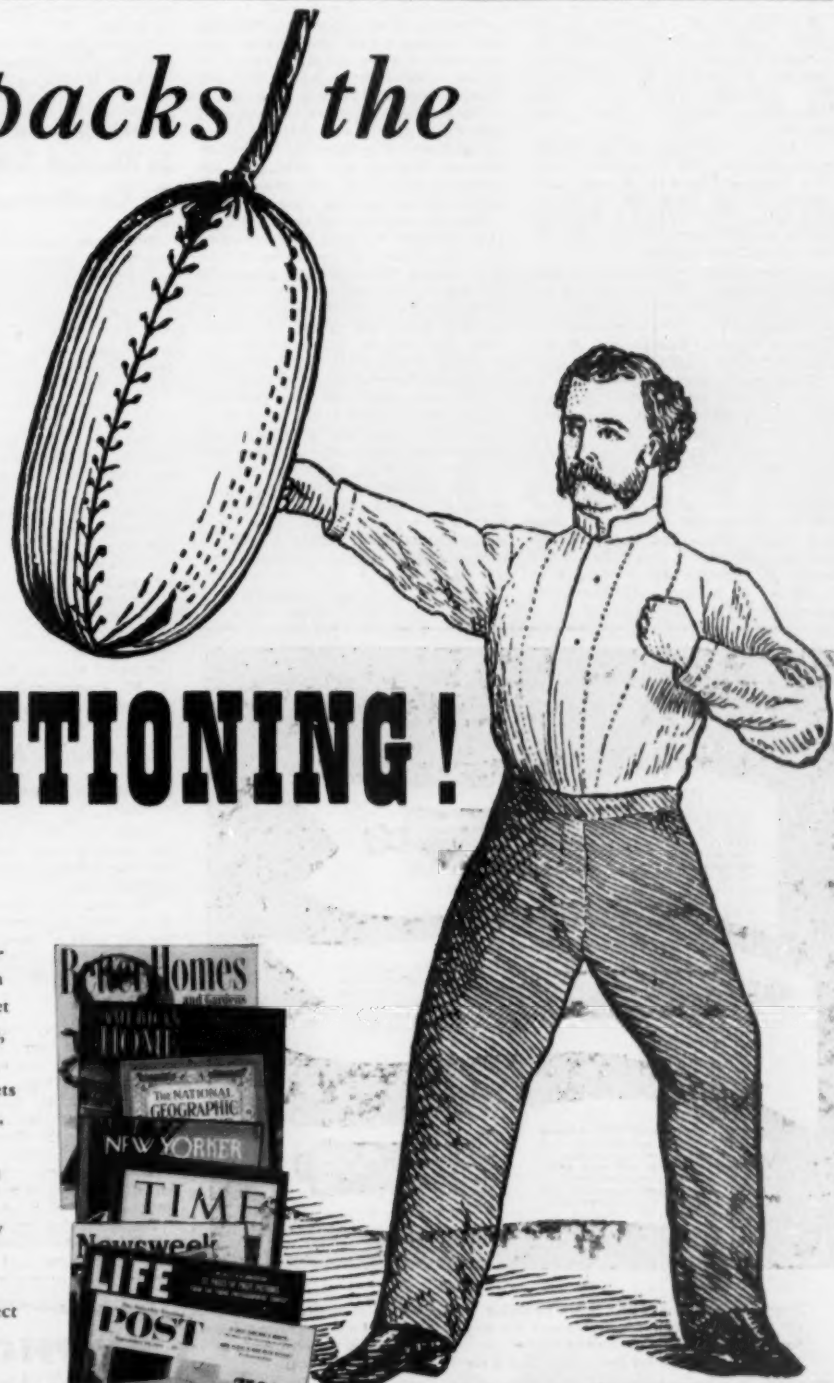
memo to all media on a "free" vacation offer.

Community Surplus Stores had succeeded in announcing a lottery in connection with the opening of a new store in one edition of a local paper, but it was killed in later editions. In this lottery, customers were given chances on a number of prizes in direct ratio to the amount of their purchases at the store.

The same type of promotion was to be conducted during "Music Week" by Lyon & Healy, Inc.

Tele-Tronics, Inc. offered a "free" seven-day vacation at either the Hotel Capri in Miami Beach or the Oakton Pines Lodge at Eagle River, Wis., to the first 500 families buying television sets. The advertisement did not explain, according to the BBB, that Tele-Tronics paid only the rent on a single room, the customer had to pay the cost of transportation, meals, and incidentals.

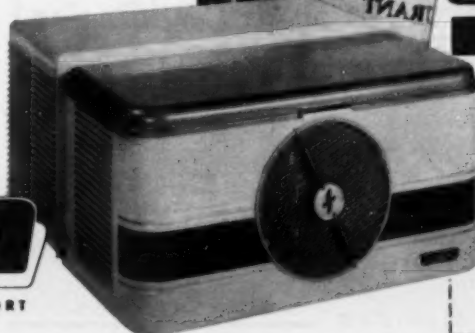
# Fedders packs the WALLOP IN ROOM AIR CONDITIONING!



THE longest, strongest reach in room air conditioner promotion belongs to Fedders again in 1952. Big, "right smack on the button" ads get and hold attention in Saturday Evening Post, Life, Time, Newsweek, Better Homes & Gardens, and 14 other national magazines. And in major markets Television Spot Campaigns featuring Yogi Berra, Phil Rizzuto and Ann Sothern will bring extra prospects into your store. There, you can get 'em face to face with the most effective tool ever designed to sell room air conditioners—the New Fedders Demonstration Center! It presents the entire Fedders story... cues the salesman... or works as an automatic salesman when the prospect is alone. And to make your profit prospects complete, the new Fedders line— $\frac{1}{2}$ ,  $\frac{3}{4}$ ,  $\frac{1}{2}$ , 1 and  $1\frac{1}{2}$  ton capacities—is greater than ever this year!

**fedders**

A GREAT NAME IN COMFORT



MAIL THIS COUPON TODAY!

FEDDERS-QUIGAN CORPORATION, Dept. AC-6  
Buffalo 7, New York

Gentlemen: Please send me full information on how I can sell Fedders Room Air Conditioners in volume.

Name \_\_\_\_\_

Address \_\_\_\_\_

Company \_\_\_\_\_

City \_\_\_\_\_ County \_\_\_\_\_

State \_\_\_\_\_



YEAR-ROUND AIR CONDITIONING of Haworth Manor is inspected by L. H. Hirschbach, G-E distributor; E. M. Dennis, sales representative; and J. D'Agostino, builder.

## 'Milestone In Home Air Conditioning'

### New Jersey Home Development with Year-Round Units Indicates Market In Northern Part of Country

HAWORTH, N. J.—What is believed to be the first large-scale development in New Jersey to feature complete year-round air conditioning was announced here by James D'Agostino, prominent New Jersey builder.

D'Agostino said the second section of his Haworth Manor project would have General Electric heating and cooling in each home. There will be 65 homes in this section of Haworth Manor which is just off Knickerbocker Rd. in this community.

A furnished ranch-style model home featuring G-E year-round air conditioning was opened to the public recently. The completely air conditioned 6-room houses are in the \$22,000-\$29,000 price range.

D'Agostino is convinced that it won't be long before other builders will include air conditioning in their plans. "It's a simple matter of competition and we wanted to be the first," he said.

General Electric officials hailed Haworth Manor as "a milestone in the home air conditioning field." The fact that it is in New Jersey is important evidence, they said, that residential air conditioning is of interest to people in northern climates and not restricted to the South alone.

"People everywhere are thinking and talking about the benefits and comforts of home cooling," said S. J. Levine, general manager of the G-E home heating and cooling department.

"Home cooling today is practical and within the means of the average homeowner. The age of residential air conditioning has definitely arrived, as testified by this project and others throughout the country."

The air conditioning system in the Haworth Manor model house consists of G-E's residential packaged cooling unit and a G-E gas-fired warm-air furnace. The same duct system brings filtered cool or warm air to each room in the home. Two separate thermostats automatically assure the homeowner of even temperatures the year-round.

Haworth Manor is also the first major development in the country to use G-E's "Air-Wall" system of air distribution for both heating and cooling. Air-Wall registers send a fan-like pattern of air over the outer walls of a room where the greatest heat loss or gain takes place. This keeps floors comfortably warm in winter, and in summer provides gentle circulation of cool air without chilling drafts, it was explained.

The heating and cooling units in-

stalled in Haworth Manor are so compact that more than 1,200 sq. ft. of area remains free in the huge basement of the model house for use as a recreation room, workshop, or den, G-E said. Controlair Co., Fort Lee, N. J. G-E distributor, made the installation.

B. J. Bergton, Teaneck, N. J., renter, is exclusive agent for Haworth Manor. The model house was built from designs by Laurence R. Moon of Englewood and Frederick W. Hansen of Tenafly.

The Haworth Manor model contains three bedrooms, two baths, and a two-car attached garage. The 23-ft. living room boasts a huge thermoglass picture window and a fireplace.

As an unusual feature in ranch-style architecture, the Haworth Manor model has a center hall and an additional side hall separating sleeping quarters from the living rooms. Some models contain extra informal living rooms over the garage.

Haworth Manor is the third large-scale project announced within the past two months to feature G-E year-round air conditioning. The company announced a 210-home low-cost development in Dallas late in March, and in April a 125-unit project also in Texas.

G-E officials say they are currently carrying out negotiations for similar projects in other areas.

## Westinghouse Names Blair To Manage Self-Contained Air Conditioning Products

PITTSBURGH—Howard A. Blair has been appointed product manager of self-contained products, Air Conditioning Div., Westinghouse Electric Corp., the company announced.

Blair, whose background in air conditioning dates back to 1933, has been in charge of air conditioning service activities for nine years.

Following his graduation from the University of Cincinnati in 1929 with a degree in electrical engineering Blair joined Westinghouse as a graduate student at East Pittsburgh, Pa.

After attending engineering and design schools he became a development engineer on domestic refrigeration at the Springfield, Mass. plant which later led into development engineering on early self-contained air conditioning equipment.

Activities associated with his later work include technical writing and management of renewal parts sales and order service. Blair is a member of the American Society of Heating & Ventilating Engineers.

## Park Cities YMCA Gets Latest In Heating, Cooling

DALLAS—The latest in cooling and heating have been embodied in the new \$350,000 Park Cities YMCA building here.

The structure, which was built to serve the separately incorporated Greater Dallas communities of Highland Park and University Park, is the first YMCA building in the country to have air conditioning throughout.

Then, for days when the North Texas climate turns brisk, there is a radiant heating system of embedded wrought iron pipes in the floor of the 16,800 sq. ft. building. The floor is covered with asphalt tile.

Included in the Park Cities YMCA are offices, a kitchen, snack bar, and 400-seat auditorium with game room which is complete with a stage and equipped to show motion pictures. Plans are being studied for further construction to include a swimming pool, gymnasium, and other facilities.

## TYPHOON Air Conditioning

ENGINEERED FOR EVERY NEED

PRICED FOR EVERY BUDGET

- Air Conditioning Units 1½-20 tons
- Multi-Packaged Systems Up to 60 tons
- Prop-R-Temp Heat Pumps 2-20 tons
- Evaporative Condensers
- Packaged Water Chillers

TYPHOON AIR CONDITIONING CO., Inc.  
794 Union Street, Brooklyn 15, N. Y.



## Cool Chicago Conventions

COOL HEADS should prevail at July's Republican and Democratic conventions in Chicago's huge International Amphitheater since the structure is being air conditioned. It is assumed that the union will allow the work to be finished. Workmen are shown installing one of the giant air ducts which will extend across the ceiling. This duct system, coupled with booster air conditioning units, will be capable of producing 290,000 cu. ft. of conditioned air per minute—enough to completely change the air five times an hour. Thermostatic controls developed by Minneapolis-Honeywell will react to the added heat and humidity generated by the expected 12,000-person crowds and make immediate adjustment.

## 'Drive-In Teller Service' Made Possible By Packaged Units In Waco, Tex. Bank

WACO, Texas—Three Carrier ¾-ton package air conditioners at the First National Bank here are making possible one of the most unusual forms of service offered in Texas.

Well aware that bank transactions are falling off due to the lack of parking space in the downtown area, and anxious to capitalize on the influx of military personnel in the past year, the First National Bank came up with a unique solution by converting a former parking lot into a "drive-in banking service."

Under the plan, automobiles drive in from Washington Ave. through a narrow steel-fenced driveway which fans out to permit three cars to drive abreast through three "teller cages" set on concrete islands. The "teller

cages," connected by telephone to the main bank across the alley, are 5 x 8-ft. brick buildings surrounded with bulletproof tinted glass, and equipped with electrically-operated deposit doors, which swing open to receive checks, and swing open again to allow the customer, seated in his automobile, to reach in for the cash.

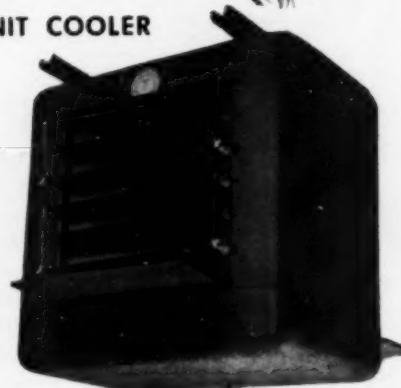
Built with flat roofs, the three cubicles are fully exposed to the hot Texas sun throughout the day, and would often hit temperatures of above 110°.

Package air conditioning was specified in the installation and three ¾-ton Carrier units were used, mounted at the ceiling along the rear wall of each cubicle. A comfortable temperature of less than 80° is maintained.

"some combinations can't be beat!"

Tenney UNIT COOLER

Tenney Unit Coolers, scientifically designed in modern style for safe comfort cooling, incorporate the correct ratio of prime to secondary surface with a staggered arrangement and rifled interior for highest efficiency. They have added capacity, assured defrost cycles, "sweet" elimination, variable directions of air flow, non-leak joints and a positive bond of faceted fin to tube. And—they're easy to install, easy to service.



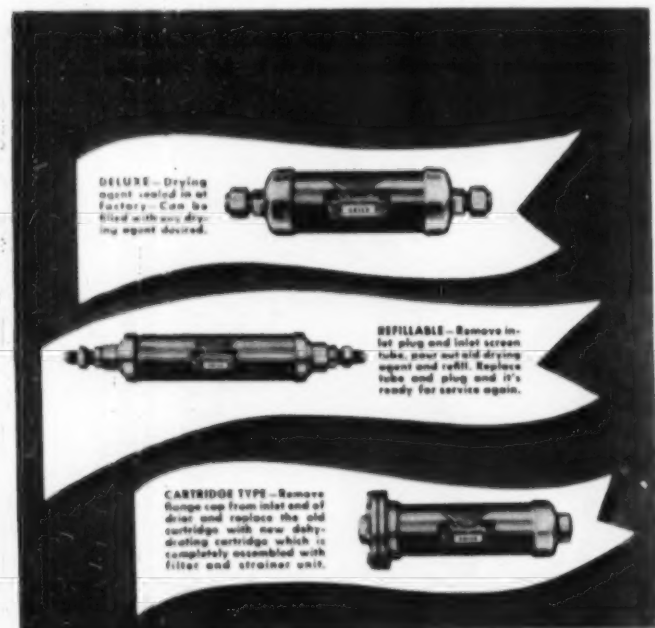
It takes a combination—a well integrated Tenney team of top engineering and practical application of the lessons of experience—to produce the most efficient and durable refrigeration equipment. Take this Tenney Unit Cooler... years of research and experience in the refrigeration field have gone into its design and manufacture. This experience, combined with the most modern engineering methods, is your guarantee of complete satisfaction. That's why, for either standard or special installations, it pays to "take it to Tenney."

SERVICEMEN  
CONTRACTORS,  
JOBBERS,  
ENGINEERS

Tenney brings you the advantages of advanced engineering and manufacturing facilities to handle any and every refrigeration problem, for the Tenney line is built to suit your needs. Outline your problem, and let us prove that a Tenney unit will solve it.

**Tenney**  
ENGINEERING, INCORPORATED  
Dept. E, 26 Avenue B, Newark 5, New Jersey

Engineers and Manufacturers of Refrigeration and Automatic Environmental Test Equipment



There are Mueller Brass Co. driers available for every type of service. They keep the refrigerant clean and dry, remove the minute particles of foreign matter and they are safe and reliable wherever they are installed. Each of the three types of Mueller Brass Co. Driers shown here have these fine construction features:

- Exclusive cone screen filter-strainer filled with chemically purified wool provides a filter area 3½ times the area of a disc. This filter increases the working life of Mueller Brass Co. driers because it virtually eliminates clogging, insures free flow of the refrigerant at all times.
- Husky forged brass ends are threaded and soldered to the heavy copper shell to provide an extra factor of safety.
- Wide wrench flats make it possible to get tight connections that stay tight.
- A beautiful finish that makes an especially attractive installation in any system.
- Mueller Brass Co. driers are available in sizes from ¼" to 1½" outlets, and desiccant capacities from 3 cu. in. to 242 cu. in.

Write for catalog R-152 describing complete line of STREAMLINE Refrigeration products.



**MUELLER  
BRASS CO.**

PORT HURON 10, MICHIGAN



# Commercial Refrigeration

## "Filth In Our Food"

### Survey Finds Deplorable Conditions, No Refrigeration In Wholesale Food Markets

NEW YORK CITY—Sadly lacking in refrigeration, as in other needed improvements, the largest wholesale fruit and vegetable markets of the country are "a disgrace to the nation, a health peril, a nauseating throw-back to the days when sanitation was unknown."

That's the charge made by Howard Whitman, well-known journalist, in one of a series of three articles which are currently appearing in *Redbook* magazine.

Whitman bases his conclusions on a year's study of wholesale food centers in the chief cities which he made in company with Federal food and drug inspectors. His first article, supplemented by startling photographs, constitutes a scathing indictment of conditions in this branch of food handling.

#### UNBELIEVABLE SQUALOR

Entitled "Filth In Our Food," the article tells of almost unbelievable squalor and barbaric primitiveness in the wholesale markets. Describing

the "Market Place" in Baltimore, Whitman said:

"All along the crowded rows of wholesale houses baskets of foods—carrots, broccoli, spinach, peppers, turnips—were stacked on the sidewalk and in the street, their latticed bottoms soaking up the foul waters of the gutters . . .

"The street and sidewalks are the icebox of the old-fashioned market. I asked one wholesaler how long he'd hold food that didn't sell right away. 'Till it goes bad,' he said, adding, 'I'll sell it even if it is bad. I got to get some price for it.'"

#### SIDEWALK HIS SHOW WINDOW

"Another merchant, pointing to his rows of produce covering the sidewalk and stretching 12 ft. into the street, said, 'This is my show window. I couldn't do a thing without the sidewalk.'"

Pursuing his studies further, Whitman found conditions progressively worse. Horse excretions were in direct contact with foodstuffs. Porters expectorated casually against open crates. "A dog filthied the sidewalk, and a moment later a basket of spinach was set down on the spot."

Rats are prevalent in virtually all the markets he visited. The writer was warned in Washington Market, New York, by the Federal inspector who accompanied him, that he might be bitten by rats. Whitman thought this was a joke—until a moment later a river rat jumped up in front of him. Bodies of dead rats and rodent offal were frequently found in the food consignments.

Whitman pointed out that through Washington Market, "a stinking, murky strip 10 blocks long," moves produce from 40 states. He said that 200,000 freight carloads of fresh fruits and vegetables "run its gauntlet each year" and that the market "feeds one-tenth of America."

Telling of a visit to a banana basement, he said:

#### BANANA RIPENING METHODS

"We made our way into the ripening room in a farthest recess of the soggy basement. There, bunches of bananas were hanging by ropes, ripening for your fruit bowl."

"I looked at the floor and almost retched. Heads and entrails of chickens were strewn about in a putrescent mess. Among the bananas a paper bag of chicken heads, red, soggy, and matted with feathers, was hanging."

"What's this for?" I asked.

"To keep out the rats," the banana merchant answered.

"To keep out rats?" I repeated. "Sure. The chicken heads are for the cats. And the cats keep out the rats."

Whitman described the Washington Market as "rotted buildings, board-patched, dirt-encrusted slums, full of cracked and dropping plaster," but other cities were equally bad. "Vegetables soaked up sidewalk slop in Philadelphia's Dock Street Market; piles of food stood on the filth-strewn streets of Faneuil Hall Market, Boston, and in the slatternly markets of Pittsburgh."

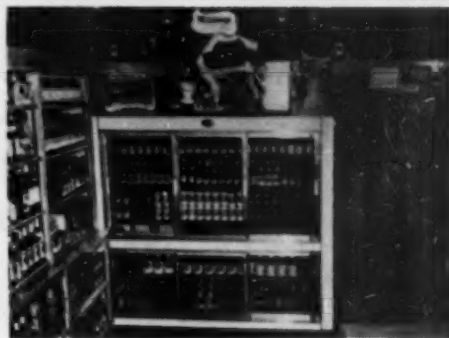
#### AIR CONDITIONING IS UNKNOWN

The deplorable lack of modern facilities was evident everywhere; and air conditioning apparently is an unknown word. He stated that the pervading stench in some of the food centers was such that it made even the wholesalers and their employees violently ill at times.

Restricted as they are by the law which limits them to interstate commerce, the Federal food and drug inspectors strive to control the evil and are only sporadically successful.

"Tons of food unfit for humans are seized daily by the inspectors," Whitman continues, "the inspectors have intercepted on their way to your home, and mine, such items as popcorn and peanuts in which mice have nested, crates of dried fish over which filthy-habited handlers have urinated, blueberries infested with maggots."

In summary, the author explains that his purpose in the study was not just to uncover these conditions but also to point out how they can be eradicated, and the problems confronting those who seek to end them.



ALL-GLASS FRONT reach-in was installed when Jack Rizzi remodeled his liquor store. Extra service of having cold beer ready to take out keeps the cash register ringing.

### Cold Beverages Keep Customers Coming to Remodeled Liquor Store

STAMFORD, Conn.—An all-glass-front Sherer reach-in refrigerator fitted in perfectly with the remodeling of Jack Rizzi's liquor store on West Broad St. here, and the proprietor believes that having plenty of cold beverages on hand is a service that keeps the customer coming back.

Rizzi commissioned the Economy Freezer Supply Co. of Cos Cob, Conn. to do the remodeling job. The Sherer model 70-SD refrigerated reach-in was selected because it fitted in so well with the shelving on which the package liquors are stocked, and because of its complete display area.

### 5,400 Stores Now Have 100% Self-Service Meats

CHICAGO—Meats are being sold on a 100% self-service basis in 5,400 stores across the country, a survey made by Armour & Co., meat packers, revealed recently. This compares with only 178 such stores five years ago.

For the year ended April 1, the survey showed, 1,400 more stores were added to the previous total.

Still, the survey noted, only about 2½% of all stores handling fresh meats have 100% self service, though they do 14% of the total retail meat business.

#### JUST ASK US!

Turn to "What's New" Page for useful information on new products.

Now  
YOU CAN  
SKIP  
A DAY



WITH THE *New*  
**INTER-MATIC®**  
**"SKIPPER"**  
TIME SWITCH

For automatic control of air conditioning systems and commercial refrigeration defrosting, where it is desired to skip operation of the time switch on Saturdays, Sundays, Holidays, or other selected days. Skips one or more days of the week.

- Simple to set and operate
- Complete line available
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SEND TODAY FOR FREE CATALOG AND PRICE SHEET — 682.

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TIME SWITCH

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Quality  
  
HIGH  
AND  
LOW BOY  
MODELS  
  
LARKIN  
WALL  
HUMI-TEMP

Quality speaks a language everybody understands. Wholesalers, dealers, and users alike know that the name Larkin means quality—of workmanship, materials, and performance.

Manufacturers of the original Cross-Fin Coil — Humi-Temp Units — Evaporative and Air Cooled Condensers — Air Conditioning Units and Coils — Direct Expansion Water Coolers — Steel Vacuum Plate Coils — Heat Exchangers.

WATCHDOG OF THE NATION'S FOOD SUPPLY

**LARKIN COILS**

New features + greater value = more sales for you



Some model with all the same features is also available in sliding solid doors of the extra cost.

sliding door Wall Case with exclusive Jord-O-Matic coil

Here is the extra refrigerator value your prospects want . . . 25% more storage capacity with no increase in floor area . . . Perfect uniform refrigeration at minimum operating cost with exclusive Jord-O-Matic ceiling-mounted blower coil. Choose between solid or Thermopane doors, white hi-baked enamel or stainless exterior.

### JORDON glass front Dairy Case with mart-type superstructure

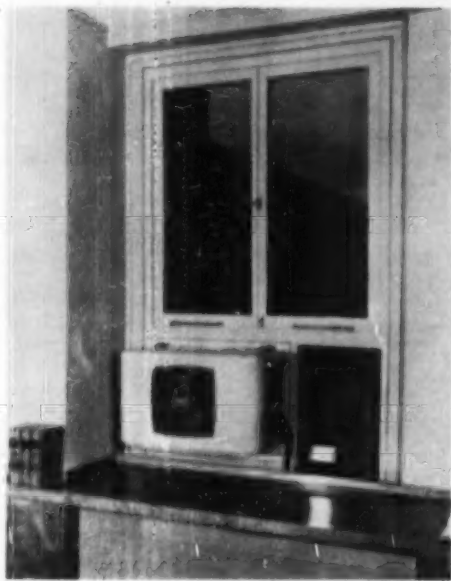
A great volume builder in any store featuring dairy products . . . Jordon non-fogging Thermopane glass front . . . full-width top opening . . . Superior Jordon "Auto-Body" Hi-Baked enamel finish . . . large mart-type superstructure . . . these all build "plus" profits for storeowners . . . "plus" sales for you!

See your Jordon Sales Representative or contact

**Jordon**  
REFRIGERATOR COMPANY  
58th & Grays Avenue • Phila. 43 • Pa.

At Jordon . . . Reliable Refrigeration





private offices No. 2 and No. 3 (see floor plan on opposite page). Note the new windows installed to admit maximum daylight and for ease and safety in washing. Also note that with the building construction of recessed windows the unit does not protrude into the office.

## Combined Console, Window Coolers Provide Economical Flexibility

Development of This Type of Installation Opens  
Vast Non-Competitive Home, Office Market



VIEW OF 1/2-hp. water-cooled console from general office. Front panel of the enclosure has been removed to show easy accessibility. The unit is mounted on a platform on rubber strips for quietest possible operation. Duct installed above the unit is for the conditioned air discharge. Unit is thermostatically controlled for 4-season comfort.

PHILADELPHIA — The qualified, wide-awake installing type of dealer who thoroughly understands how to capitalize on the flexibility and other advantages of the properly designed, often non-conventional installations of both window and console units will be the successful room air conditioner dealer, believes William Kramer, president of Kramer & Co. Con-

tors, Inc., located in Philadelphia. With a complete line of room air conditioners from 1/2 hp. through 1 1/2 hp. such a dealer can compete successfully, and often with a decided profit advantage to himself and better results for his customer, with dealers handling the larger types of systems, Kramer feels.

The use of an integrated system

of both window units and consoles in various sizes, installed in multiple, as against one large "package cooler" on a central system gives the qualified dealer a vast, untapped, relatively non-competitive market while he still retains the advantages of also making home and office sales and installations of conventional type.

Kramer & Co. has been installing and selling room air conditioners and store coolers for the past five years and during this time has made a number of unusual but most practical installations of room air conditioners.

"The dealer, now concerned over

price cutting, special deals, and the limitations of window units, who realizes the need for versatile equipment to fill the gap between a 1/2-hp. window unit and a water-cooled 3-hp. store cooler would do well to acquaint himself and his staff with the unlimited possibilities of a flexibly designed console room air conditioner," Kramer states.

"Used either singly or in multiple, installed in the room or remotely or in combination with window units, the relatively unpromoted console room air conditioner reveals new horizons to the progressive dealer."

### OFFICES HAD BEEN LAID OUT WITHOUT THOUGHT OF COOLING

To prove his point Kramer cited a recent installation of Remington consoles and window units by his company in the law offices of Zoob & Matz, Western Savings Fund building, Philadelphia. The law firm was moving to new and larger quarters. The new offices had been laid out by a prominent architect but without regard for air conditioning.

Air conditioning was deemed essential and authority was given before any work started to use any type of equipment that would be most economical and efficient, while providing the desired flexibility and preserving the attractive, modern decor of the offices.

A survey showed that at least five tons of refrigeration would be required to cool the four private offices, a general office, the library, and the waiting room. The advisability of one central unit was first considered. The offices were on the 16th floor. A 5-ton unit would require a separate water line from the basement and the building owners would demand a separate meter. Expensive ductwork would have to be run to each office.

Zoob & Matz had but a five-year lease. Should they move again what disposition could be made of a central unit? The amount of water required for a unit of this size would warrant the installation of a cooling tower—added expense. Considerable space would have to be sacrificed from the much needed office area to accommodate the central unit and associated ducts.

### PLANNED TO USE SOME OLD EQUIPMENT

When these problems came to light and since Zoob & Matz had three Remington model 8, 1/2-hp. window units in their old offices, a consultation was held with the local Remington representative to see if a plan could be devised to do the entire cooling job with room air conditioners and thus utilize the units which could be readily moved from

(Concluded on next page)



For dealer plan address inquiries to Dept. AC582



**HOT**  
months ahead mean  
**COOL PROFITS** now  
with **SERVEL**  
**Supermetic!**



### SUPERMETIC MEETS EVERY REFRIGERATION REQUIREMENT

... with air-cooled and water-cooled units in sizes from 1/4 through 3 HP ... backed by Servel's low-cost Factory-Extended Warranty Plan.

**SUMMERTIME** is quittin' time for old refrigeration units. So right now—before thermometers soar—start making the most of the big and ready-made condensing unit replacement market.

**SELL SERVEL SUPERMETIC**—the Profit Line. It's a sure way to shoot your present income higher, while building a brighter business future. And you can get a Servel hermetic in the exact size you need . . . quickly and conveniently through your near-by Servel Wholesale Supplier. Over-the-counter "one-stop" service saves time, helps you get back on the job, pleases customers who need constant dependable refrigeration.

**BEAT THE HEAT**—and your hottest competition—sell Servel SUPERMETIC for every replacement requirement. Servel hermetics are simple to install, easy to check. Interconnections are completely assembled. Ask your Servel Wholesaler for a copy of factory manual containing complete installation and maintenance instructions.

**DON'T WAIT TOO LONG . . .  
MAIL COUPON TODAY!**

**Servel  
SUPERMETIC**

Models for every commercial refrigeration and air conditioning use . . . 1/3 to 5 HP.

SERVEL, INC.  
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Send full details about Servel Supermetic and name of nearest Wholesale Supplier:

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HOW CAN I EVER THANK YOU FOR PUTTING  
**ANSUL OIL** IN OUR REFRIGERATING SYSTEM\*  
... WE HAVEN'T HAD ANY TROUBLE SINCE  
YOU DRAINED AND REFILLED THE  
COMPRESSOR.

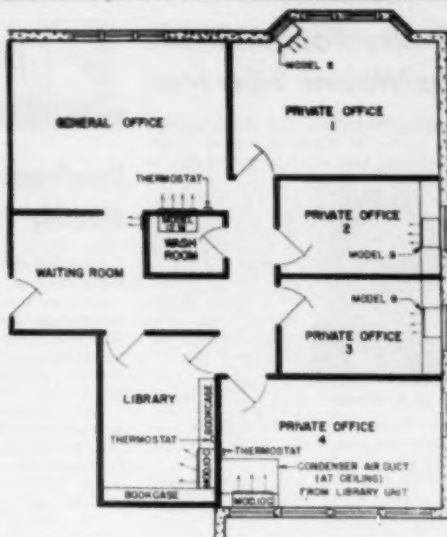
\* ASK ANY REFRIGERATION  
SERVICE MAN . . .  
SEE PAGE 20  
For  
Other ANSUL  
Products







"AIR CONDITIONING CORNER" of the library. 1-hp. console is concealed behind paneling. All of the heating, ventilating, and cooling is handled by this console. Thermostat may be seen mounted below the switch control so that the heat of the indicator lamp will not affect it. Lower louvers are the intake for recirculating room air; upper louvers are for air outlet. Note how cupboard below unit blends with the rest of the woodwork. Entire front panel is removable for easy access to the unit.



FLOOR PLAN shows complete integrated air conditioning system and layout of offices. Note how little usable space the room air conditioner occupies in each office. Location of the three 3/4-hp. Remington window units and the three Remington consoles may be seen.

## Individual Temperature Control Possible

(Concluded from preceding page)

Since three of the private offices were on the outside of the building and were of medium size the 3/4-hp. window units would handle them nicely. Private office No. 1 (see floor plan) required no special installation as the existing window could be used quite satisfactorily.

Private offices 2 and 3 had windows of the tilting type which made them unsuitable for installing the Model 8 units if, at the same time, facilities were to be provided for washing windows without danger to the window washer.

### CONCEALED DUCTWORK

It was decided to remove the frames completely and to install new frames designed to give maximum daylight and at the same time make window washing quite simple. The new frames cost approximately \$65 per installation.

This arrangement also allowed Kramer to run concealed ductwork

from this window to another model 10C129, 1-hp. Remington console located on the other side of a partition in the library, which is an inside room. The top of the window is used for the library unit condenser work.

The duct is installed in two sections, one for condenser air supply and one section for hot air exhaust. One inch of glass wool covers the entire duct which in turn is covered by 1/2-in. plywood stained to harmonize with the balance of the office.

The library unit is equipped with optional 4-season automatic control, including strip heaters supplying 7,000 B.t.u./hr. of heat. Since this is an inside room it is conceivable that while a conference is in progress in winter, as well as summer, there may be a need for ventilation with or without cooling or heating. The console will supply this while automatically controlling the temperature of the room. This library unit is also built into a corner and blends with the woodwork of the shelving.

At this point five of the seven

rooms had been air conditioned with a total of approximately 4 1/2 tons capacity, using air-cooled room air conditioners entirely. Not a length of piping had been run, no water would be used in their operation and only a few feet of inexpensive ductwork had been required. Two rooms were left, the general office and the waiting room.

It was decided to use a single model 12W 1 1/2-hp. water-cooled



Remington console which could be located in a central washroom. Since the unit would use only a small amount of water it could be connected to the existing piping in the room without using a separate meter.

The unit was placed on a solid platform approximately 3 ft. off the floor and a gravity drain connected for water disposal. A sheet metal duct was placed above the unit for conditioned air discharge.

Two conditioned air outlets are provided, one into the general office, and the second into the waiting room. This unit is accessible for service from the front and rear. Complete external thermostatic control is provided and the unit is started and stopped by a switch located above the thermostat. A signal light indicates when the unit is in operation.

The girls in the general office, who wear short sleeves and light dresses, prefer to keep the thermostat set between 75 and 80°. Having an individually installed unit makes this possible without interfering with the other offices. This is another big advantage in favor of individually controlled units.

### CONSOLE UNITS BEHIND REMOVABLE PANELS

All console units are behind removable panels for easy servicing. Since all are "built-in," Remington con-

soles minus the usual decorative wooden cabinets are used, and the saving thus incurred helps offset the cost of the paneling.

The complete installation consists of six units—three Remington model 8's, two Remington 10C's and one model 12W, totaling some six tons capacity.

This installation provides many advantages. Only one unit is water-cooled thus effecting a considerable saving in installation and operating expense. Each unit occupies very little space in each office so no really usable space is sacrificed in the general office layout.

The occupant of each office is able to control the temperature to suit his requirements. Should any of the personnel desire to use his office at odd hours or on weekends there is no need to operate the entire job—only the unit in the particular office which is in use.

Kramer points to this job as typical of what can be done with room air conditioners—particularly console units. If a dealer or salesman knows his business he should have no difficulty in selling a client on the idea of year-round air conditioning with console or window units or in combinations as are made possible by a complete line of air and water-cooled models.

## "Service-Master is the ideal air conditioning service body"



says **MR. ALEXANDER ORR, JR.**  
CONDITIONED AIR CORP., MIAMI, FLA.

"Service-Master has practically eliminated return trips to our shop. With a cargo area for bulky items, and well organized compartments for tools and parts, we can now carry a complete shop to every job. In a year's time, we've saved an average of more than one-half hour per day. In dollars, that amounts to almost enough to buy another Service-Master Body."

If your present truck equipment isn't adequate for your work, why not get the full story on the efficient Service-Master Body? Just clip the coupon below . . . paste it on a post card . . . and mail it. You're under no obligation, of course.



**McCABE-POWERS  
AUTO BODY COMPANY**  
5900 N. BROADWAY • ST. LOUIS 15, MO.

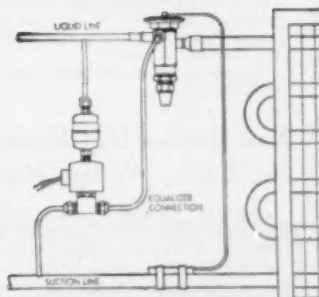
Please send me literature and complete information about Service-Master

Name \_\_\_\_\_

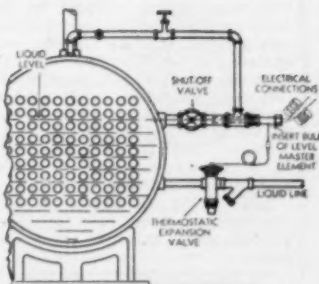
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Direct expansion system controlled by Sporlan Thermostatic Expansion Valve and 171 Solenoid Pilot Control.



Flooded system of horizontal shell and tube type with Sporlan Level-Master Control.

**both DIRECT EXPANSION  
and FLOODED**

**On direct expansion systems . . .** from comfort cooling to minus 100° F. engineers everywhere agree that for Peak Performance, it's Sporlan Right Down the Line. Why? . . . because only Sporlan offers you these time tested features.

Direct acting Thermostatic Expansion Valves from 1/8 to 100 tons Freon-12.

Sporlan Pioneered Selective Charges.

- ⊕ Charge for suction temperatures above zero
- ⊖ Charge for suction temperatures below zero
- ⊗ Charge for extremely low temperatures
- ⊙ Charge with Flow-Master Element reduces hunting on comfort cooling systems.

**On flooded systems . . .** Sporlan has answered engineers' demands for Peak Performance with the Sporlan Level-Master Control. It consists of a conventional Thermostatic Expansion Valve equipped with the new Level-Master Element, which combines the liquid level control and the expansion device into one unit. The Level-Master Control provides a modulated flow and maintains practically a static liquid level in the low side. If the liquid level drops, a heater element in the insert bulb acts as an artificial super-heat increasing the pressure in the thermostatic element, thereby opening the valve. If the liquid level rises, its refrigerating effect on the insert bulb overcomes the heater and the valve throttles.

On your next direct expansion  
or flooded job . . .

*Be Sure with Sporlan!*



**SPORLAN VALVE COMPANY**  
7525 SUSSEX AVE. • ST. LOUIS 17, MO.

EXPORT DEPARTMENT  
89 BROAD STREET • NEW YORK 4, N. Y.

## Sears Catalog Advertises Many Price Reductions

CHICAGO—Sears Roebuck's mid-summer sales catalog reveals price reductions on refrigerators, food freezers, air conditioners, and electric dehumidifiers.

Price cuts on appliances are among the biggest offered in the catalog, which shows slashes ranging to 30%.

One of the largest reductions in the appliance line was on the 11.3-cu. ft. refrigerator. This model was marked down \$45 to \$224.

A 14-cu. ft. food freezer was cut in price from \$339.50 to \$299.50. Price of the 7.6-cu. ft. model was lowered \$38 to \$194.

A reduction of \$15 was made in Sears' 1/2-hp. "Mist-Cold" room air conditioner, which now sells for \$264. The 3/4-hp. model is priced at \$329, a cut of \$20. The company is giving a special push to the air conditioners in the summer catalog.

Sears knocked \$16 off the price of electric home dehumidifiers, which were \$119.

## Now They're Offering Toys To Sell Winger Washers

BUFFALO—Bettler's went after winger-type washer business with a new potential gimmick in which the store offered a toy fire truck or station wagon free with every washer.

The promotion was staged in the store's appliance department and the wheel goods items were displayed alongside the washer to give the prospect a complete picture.

## Holst Heads Des Moines NARDA

DES MOINES, Iowa—At a meeting of appliance dealers here recently, Earl Holst, owner and manager of Beaverdale Radio Sales & Service, was elected president of the newly formed NARDA chapter. Working with Holst in completing the organization's local program of activity are R. D. O'Callaghan, O'Callaghan's Appliance Co.; and Ralph Thomas, Thomas Electric Co. O'Callaghan is also state chairman of the Iowa division of NARDA.

## Crosley Appoints Elrod As Western Sales Mgr.

CINCINNATI—The appointment of Thoben F. Elrod as western sales manager, was announced recently by F. F. Duggan, general sales manager of the Crosley Div. of Avco Mfg. Corp.



T. F. Elrod

Elrod is a native of Atlanta where he attended public schools and obtained his BCS degree from the Atlanta Div. of the University of Georgia.

For several years prior to the war he was associated with the Atlantic Steel Co. and Hotpoint Inc.

Following the war, during which he served as an officer in the U. S. Navy, he joined the Deepfreeze Div. of Motor Products Corp. as a regional manager, and was manager of field sales for Deepfreeze when he joined Crosley in 1948.

Elrod has been branch manager of the Crosley Distributing Corp. branch in Atlanta for the past year. He will be succeeded by J. D. Crawford, who was transferred from the Crosley Distributing Corp. branch in Portland, Ore.

## Hi Neighbor!

## Dealer Extends Glad Hand to New Competitor

ELMIRA, N. Y.—Haesloop's appliance store, long established at 2091 Upper Lake St., didn't display the slightest outward concern when a new competitor recently moved close by.

Instead, Haesloop's hailed its new neighbor as helping to establish an "Appliance Row" on Upper Lake St. Simultaneously with opening of the new Wright Electric Co., Haesloop's ran an institutional newspaper ad which was captioned: "Hi Neighbor!"

Copy continued: "Haesloop's, Elmira Drive-In Appliance Store, extends a hearty welcome to the Wright Electric Co., our new neighbor."

"We are glad that you have chosen Upper Lake St. as your new business location. We welcome you to the growing family of merchants who have chosen this location as ideal for their business."

"Haesloop's pioneered in the establishment of a convenient drive-in type appliance store, offering free parking and easy shopping for all. We can now call our neighborhood Appliance Row and know that our new neighbor will enjoy the success that we have enjoyed."

"Welcome—to the Wright Electric Co. from all of us."

## New Admiral Unit Serves No. Calif., Western Nev.

CHICAGO—Golden State Appliance Distributing Co. has been established by Admiral Corp. to handle distribution and service of the company's television and radio receivers, refrigerators, and ranges, it was announced by W. C. Johnson, vice president-sales.

Harold D. Conklin, former San Francisco regional manager for Admiral, has been named vice president and general manager of the new branch which will be located at 274 Brannan St. and will service the northern California and western Nevada territory formerly handled by McCormack & Co. The newly established headquarters has 16,000 sq. ft., but Conklin plans to acquire an additional 35,000 sq. ft. shortly.

John Barker, formerly with Free-Westingshouse, has been appointed general sales manager of Golden State.

# HOUSEHOLD REFRIGERATION

## Deepfreeze Launches Monthly Promotion Plan

NORTH CHICAGO, Ill.—Using the experience of successful Deepfreeze dealers over a number of years, the Deepfreeze Appliance Div. of Motor Products Corp. has brought out a month-by-month advertising and promotion program designed in particular for local use.

The monthly promotion plan includes complete descriptions of the full Deepfreeze line of home freezers, refrigerators, electric ranges, and water heaters as well as a resume of national advertising.

The plan points out to dealers the varied selling and promotional aids that are available from Deepfreeze and a full explanation of how these aids can be used to best advantage, either singly or in conjunction with others.

In addition there is a month-by-month promotion program which the dealer can stage in his own community. The program runs through December, 1952, and is made up in a series of monthly kits. Each kit is packed with promotion ideas based upon a theme which varies from month to month.

The August kit, for example, is built around the hot weather theme and includes a four-column by 10-in.

newspaper ad run over the dealer's name, an attractive window display and a door prize offer.

Prospects are circularized with postal cards, furnished in the kit, which request the recipient to visit the Deepfreeze outlet and pick up a free ticket on the prize.

Each month following, a new promotion kit is forwarded to the dealer and each month a giveaway item is featured to increase floor traffic. The newspaper ads feature either the Deepfreeze home freezer or refrigerator, and there is always a tie-in reference to other Deepfreeze products not featured in the ad.

The whole month-by-month promotion plan is keyed to timely events throughout the year, and the gifts or premiums are keyed in a similar manner. In the September kit the newspaper ad features a "back to school" theme and the advantages of home freezers in feeding the children. The gift is a pencil box for children who call upon the dealer accompanied by their parent. The November kit revolves about the idea of Thanksgiving, the gift suggested being a fruitcake.

The entire plan is so flexible that dealers can make substitutions where the gifts or premiums are not practical for them. The whole month-by-month promotion plan is designed to give continuous local coverage and to make the community "Deepfreeze conscious."

# NOW is the time to cash in on the Moisture Monster



Right now is the best time to sell Air Driers—when moisture in basements starts toward its seasonal peak. Your prospects are being plagued by the damage the Moisture Monster does—ruining woodwork . . . rusting metals . . . causing mildew and mold . . . keeping laundry from drying. They're ready to buy—and powerful Oasis national advertising is urging them to buy now!

## OASIS AIR DRIERS ARE SETTING NEW SALES RECORDS!

Even better than record-breaking 1951 sales! That's what Oasis Dealers are reporting. There's no doubt about it—Air Driers are the new big profit appliance line! Don't wait any longer to get into this constantly growing market—find out about the Oasis Air Drier sales plan TODAY!

Oasis gives you the sales advantage of a famous, nationally-advertised Air Drier . . . a dramatic floor display "Moisture Monster" to tie you into Oasis advertising . . . direct mail . . . point of sale material . . . newspaper mats . . . and a tested sales plan that closes 9 out of 10 demonstrations! Don't wait until the best selling season is over—mail the coupon today!



# OASIS Air Drier

ELECTRIC DEHUMIDIFIER

Made by the World's Largest Manufacturer of Electric Drinking Water Coolers

COPYRIGHT 1952 THE EBCO MFG. CO.

Get all the facts about the profit-making OASIS proposition—

MAIL THIS COUPON TODAY!

THE EBCO MANUFACTURING CO.  
404-B W. Town Street, Columbus 8, Ohio  
Give me the facts on the money-making Oasis proposition.

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_



CASE COILS AND FINNED TUBE PRODUCTS

\* Unit Coolers \* Unit Heaters

WRITE FOR CATALOG  
MERCHANT & EVANS CO.  
PHILADELPHIA 46, PA.

La Crosse Bottle Cooler

The Blue Bird

Yukon Walk-In Cooler

Economy Pro-Cooler

Direct Draw - Refrigerated Freezer

Combination Direct Draw

New Club Special

New Chubette

12 Tray Exhibit Cooler

25 Tray Ice Cube Maker

Supreme Brainboard

**LOOK TO LA CROSSE FOR THE BEST IN QUALITY REFRIGERATION EQUIPMENT**

WRITE TODAY FOR COMPLETE INFORMATION

**LA CROSSE COOLER CO.**

Factory and Gen'l Office: 2801 Lacey Blvd., S., La Crosse, Wis.  
Export Office: 80 Broad St., New York City. Cable Address: Eximport.

Refrigerated Display Case Salesmen in  
BOSTON, PHILADELPHIA, CLEVELAND,  
TOLEDO, MILWAUKEE, BIRMINGHAM

## DO YOU WANT TO OWN YOUR OWN CASE SALES BUSINESS?

(and don't at present because you can't finance it)

If you consider yourself to be one of the outstanding Case salesmen in the country, if you're ambitious to be on your own—if you possess a good, clean background—then here's a wonderful opportunity for you.

Write us immediately, giving full particulars about your age, education, sales experience, and all the pertinent data that we should have to know you better. If we think you're the man we want we'll arrange an interview with you fast.

This is a factory ad and has no connection with any distributor in your area, so if you are interested do not hesitate to write. All replies will be treated in strictest confidence.

Write to Box No. 4022

Air Conditioning & Refrigeration News



## INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

"I thought I saw more thundering punches landed than Tunney and Dempsey ever dreamed of landing."—Bill Corum.

"Neither Walcott nor Charles can be mentioned in the same breath with Louis, Jack Dempsey, Gene Tunney."—Bob Murphy.

"Most boxing experts at ringside thought Charles was the victim of the greatest robbery since the Brink hold-up in Boston."—Tommy Devine.

"The general opinion (of ringside critics) seemed to be that the decision was fair."—AP.

"Walcott charged that Charles 'hit low 10 times.' . . . Walcott (didn't) appear disturbed by the challenger's below-the-belt sniping."—Sam Greene.

"Jersey Joe . . . said: 'Charles hit me low at least eight times. Some of them really hurt.'"—AP.

"Walcott: 'He never hurt me. . .'"—UP.

"Walcott . . . deserves some credit for discarding for the most part the walkaway style that had made him infamous."—Sam Greene.

"Walcott used his patented 'Jersey shuffle' to move in and out of danger."—Tommy Devine.

"Why the heavyweight crown still rests on the head of the ageless Walcott only three strangely-reasoning officials can tell."—Tommy Devine.

"I think Walcott still deserves to rule as champion."—Bob Murphy.

### Puzzle Contest

A handsome book will be awarded to the first subscriber who solves the following riddle—and mails the solution to "Dope."

John is 24 years old.  
He is twice as old as Bob was when he was as old as Bob is now.  
How old is Bob?

### Quote of the Week

"What a beneficent provision of the Creator it was, to roll our little

planet but one side at a time next the sun, that while one-half of the world fretted and stormed and minned, the other half might repent and sleep."—WILLIAM ALEXANDER CARPENTERS.

### Have You Read It?

Probably the best children's story to come along in many a year is Felix Salten's "Bambi."

Son Gregory re-read it the other day, and called Dope's attention to the title-page. "Bambi" was translated by Whittaker Chambers.

This is the same man whose revelations of Communism-in-high-places (the Alger Hiss story) enlivened the *Saturday Evening Post* for an unprecedented number of weeks, and have been published in book form.

Not only can Whittaker Chambers write beautifully, his interest in children is sincere and noble.

### Where Were You Born?

Thanks to our polyglot ancestry America (including Canada) is a land of wonderful city-names. There's Medicine Hat and Broken Bow, Dead Man's Gulch and Pizen, Oakkosh and Kalamazoo, and Paducah and Vinegar Bend. In Christian County, Kentucky, there's a place called Pod; in Logan there are Halo, Dot, and Schochoh; in Simpson, Hickory Flat and Black Jack; in Barrne, Nobob, Goodnight, Bear Willow, and Eightyeight; in Monroe, Flippin and Mudlick; in Cumberland, Marrowbone, Frogue, and Mud Camp.

In Clinton County one may find, Drop, Bug, and Seventysix; in Wayne, Slat and Bud; in Russell, Horse Shoe Bottom; in Knox, Crane Nest, Barnyard, Kayjay and Salt Gum; in Bell, Bubage, Jayem, and Arjay; in Harland, Black Joe, Peevee, Highspint, Ages and Crummites; in Letcher, Defeated Creek.

Scattered over the map are Arthur-mable, Gullet, Cutshin, Thousandsticks, Dimple, Dingus, Pomp, Twenty-six, Zag, Grasssey, Index, Glo, Hi Hat, Hippo, Jump, Bypro, Tram, Grab, Head of Grasey, Ordinary, Ruin, Bruin, Gimlet, Ibex, Pigeon-roost, and Whoopflares.

And how about Smackover, Ark.; Peculiar, Mo.; Lousy Level, Nev.; Damifino, Mo.; What Cheer, Iowa; and Punkydooles Corner, Ont.?

The above towns are mere samples. Would subscribers care to contribute additional wowsers?

## Hinky-Dinky's New Super Features Air Conditioning, Wide Use of Refrigeration

OMAHA, Neb.—A basement produce department equipped with two walk-in coolers plus equipment for washing and trimming all fresh produce, and a dumbwaiter directly connecting the produce preparation area with the produce selling section on main floor directly above, are features of the new supermarket completed recently by Hinky-Dinky Stores at 50th and Underwood Sts. It is located in one of Omaha's finest residential sections and was described by Hinky-Dinky officials as the "newest and finest" outlet in the entire organization.

The air conditioned supermarket has 7,000 sq. ft. of selling space, with new refrigerated vending fixtures along two sides. These include cases for fresh vegetables, frozen foods and ice cream, fish and poultry, dairy products, and eggs along one side and the meat department across the rear.

Basement of the store provides 9,000 sq. ft. of storage space. A conveyor system is used to transfer merchandise from trucks to all parts of the basement including the meat, vegetable, and produce walk-in coolers.

A line of Huasmann open refrigerated cases is arranged against the west wall and houses the produce department, frozen foods, frozen fish, and poultry in that order. The meat department is completely self-service and extends the full width of the back wall.

Most of the area behind the meat display cases is mirrored with the exception of a section with transparent windows which permits customers to see the electric conveyors in operation in the meat cutting and packaging room, and to observe the sanitation of the white fixtures.

Additional open-type refrigerated cases hold dairy products on the east wall. An unusually large variety of cheeses is featured in one of these cases.

Both floors of the supermarket are serviced by an intercommunication system. The peach-and-cream color scheme of the store is extended to the cushioned-tile floors.

Other features of the layout include year-round air conditioning, indirect lighting, five motorized check-outs, nested shopping carts, and easy-to-read locator signs directing shoppers to the various departments. Every department vending refrigerated goods is plainly marked with a large cornice sign.

## Ward Refrigerator Names Van Fleet to Sales Post

LOS ANGELES—Ward Refrigerator & Mfg. Co.'s appointment of E. Van Fleet as its retail sales manager in charge of the San Francisco and bay area retail operation has been announced by Brent Cochran, general sales manager.

## Buy Peerless FOR PERFORMANCE

DRIP-PUMP for Condensate on Air Conditioners



The Peerless Drip-Pump solves the troublesome drainage problem—on air conditioners, coolers, refrigerators and other machines where condensate is present—by eliminating hazardous gravity drains altogether! The Drip-Pump lifts condensate up and out, overhead . . . saves valuable space.

Illustration shows Model DP-2 high capacity high lift pump for air conditioner applications. Also available is Model DP-1 packless centrifugal type pump, driven by "Bee-power" motor . . . the ideal pump for use for dome, unit or flash coolers. Both models are ruggedly built for long, hard service; easily and quickly installed. Write for full information.

Peerless of America, Inc.

1501 No. Magnolia Avenue  
Chicago 22, Illinois, U.S.A.

## Arabian King Orders Two Water Chillers for Palace

BAYONNE, N. J.—Two 75-hp. water chillers were recently manufactured by the Kol-Flo Cooler Co. here to the special order of King Ibn Saud of Saudi Arabia for use in the royal palace at Riyadh, his desert capital. John E. Kostura, president of the company has reported.

These units are the first of a large order for water coolers placed by the Saudi Arabian government with Kol-Flo, Kostura said.

The two units represented 55 tons of refrigeration each and have a capacity of 185 g.p.m. or 9,900 g.p.h. Water enters the system at 50° F. and leaves it at 42° F. The units measure approximately 15 ft. long, 5 ft. wide, and 8 ft. high and have a net weight of about 14,200 lbs. Included in each packaged unit is a control board containing gauges, warning bells, and lights.

The Naariyadh palace, where the coolers will be installed, is located in the center of the richest oil country in the world.

## Sunroc Gets Army Contract For Electric Water Coolers

GLEN RIDGE, Pa. — Chicago Quartermaster Depot, United States Army, has awarded a contract to Sunroc Co. here for a large quantity of electric water coolers.

The contract, for approximately \$1,000,000, calls for delivery of a variety of models for installation in the United States and overseas.

**BIANCO** manufactures a complete line of seating equipment



Booths . . . lounges or chairs, you can't equal BIANCO values. This chair of 16 gauge, cold-rolled tubing, with upholstered back, comes in a choice of 25 beautiful Duran colors. Style No. 272.

Factory Price—\$5.95

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through these

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**atomized air**—Eliminates waste. Gentle circulation of moisture-conditioned refrigerated air around the merchandise in the display well, without dehydrating blast, guards the appearance and freshness that wins sales and produces fast turnover.

**directional flow**—Eliminates costly spillage. Controls and confines flow of atomized air to display well. There is no loss of refrigerated air out of the case into the store area — no costly spillage to cause constant overtime work for the condensing unit.

**re-circulated air**—Saves more than 15% running time. After air moves across the display well it is drawn back to the refrigeration coil, where only a slight lowering of the temperature is required, so that it can be used over and over again. This saves as much as 15% running time and permits the greater economy of a smaller, less costly condensing unit.

**SHERER users have saved as much as \$210.00 a year per 10' display**

**plus:** Sherer's famous "Automatic Selling" features of design such as "wide angle visibility" and giant "panoramic" display wells that will increase the volume of unplanned sales . . . Sherer Distributors sell more because they have more to sell.



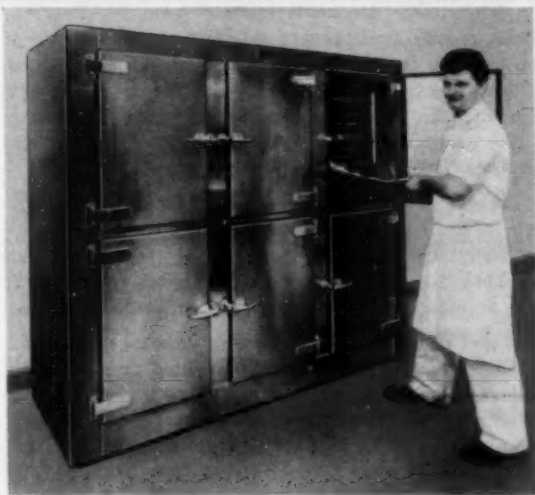
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### SELF-DEFROSTING MULLION COILS OR VERTICAL FREEZER PLATES

- + Stainless Steel Front—Aluminum Body
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- + 92, 138, and 184 Pan Capacity Models
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- OTHER APPLICATIONS
- + Self defrosting models can be equipped with shelves for Restaurant, Hotel and other uses.

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State



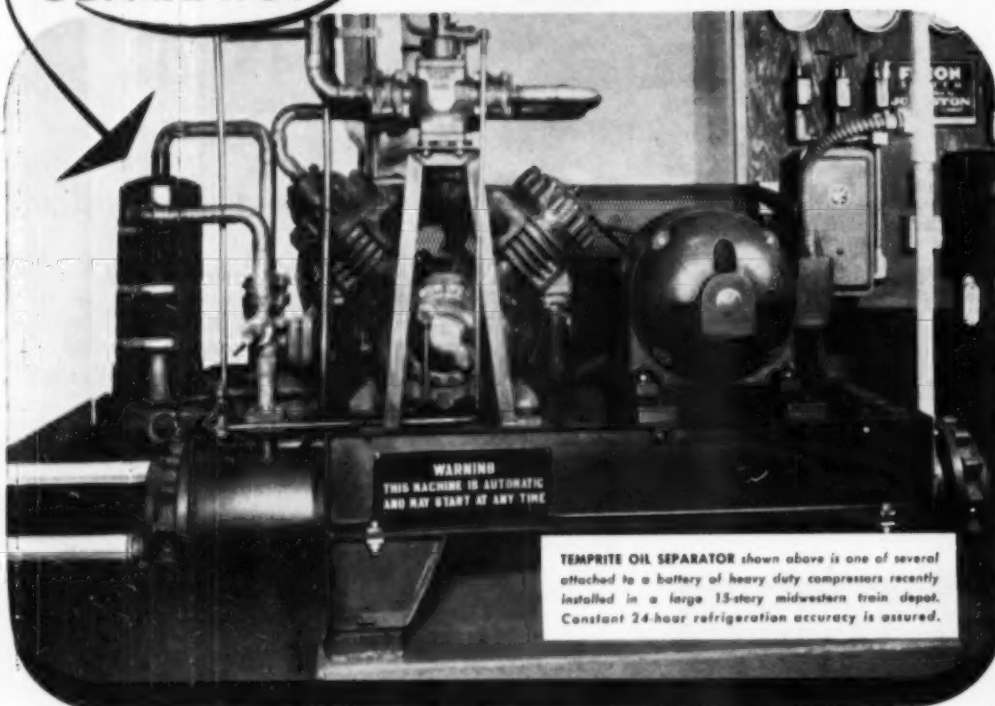
# They'll Do It Every Time . . . . By Jimmy Hatlo



## Do You Have 'Both Feet On The Ground'?

### TEMPRITE SEPARATOR

**CUTS SERVICE CALL-BACKS!**



TEMPRITE OIL SEPARATOR shown above is one of several attached to a battery of heavy duty compressors recently installed in a large 15-story midwestern train depot. Constant 24-hour refrigeration accuracy is assured.

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This is your best insurance against loss of cooling efficiency . . . because the Temprite Separator keeps the compressor oil out of the condenser and evaporator walls. If the cooling job is BIG . . . or small . . . protect yourself and your customer. Install a Temprite Separator!



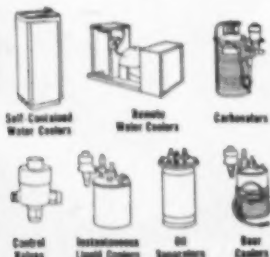
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☐ Send me complete data on your oil separators

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F. M. COCKRELL, Founder

Published Every Monday by BUSINESS NEWS PUBLISHING CO.  
450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0824.  
New York office: 521 Fifth Ave., Telephone Murray Hill 7-7158

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: \$5.00 per year, 2 years \$9.00. All other foreign countries: \$7.00 per year. Single copy price, 30 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

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VOLUME 66, No. 7, SERIAL No. 1,213, JUNE 16, 1952

"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

## Overbearing Taxes Throttle Sports, Like Everything Else

SELDOM do sportswriters and sports fans concern themselves about The State of the Union. Normally football, baseball, hockey, basketball, wrestling, prize fights, bowling, etc., are considered escape-valves for vigorously frustrated Americans.

But the grim facts of creeping socialization, administered through excessive taxation and by arbitrary bureaucrats, now are worrying the Sports World. H. G. Salsinger, the respected sports columnist of *The Detroit News*, gets this load off his chest:

"Attendance at sports events declined last year and you can bet your next month's rent that there will be a further decline this year.

"The reason for this decrease is not due to the fact that people have lost interest in sport. It is not due to the two-platoon system, to television, to the increased cost of living, but mainly to excessive taxation. After meeting their many and varied tax assessments, the citizens have little money left for sports.

"There is a Federal tax on cigars. There is also a State tax. On top of these two taxes some stores charge a 3% State sales tax. The same with liquor. It arrives in Michigan with a Federal tax already paid. Then the State adds a liquor tax. On top of these two taxes, the purchaser is charged a 3% State sales tax on the price that includes the previous two taxes.

"Chambers of Commerce in many cities are engaged in high-pressure selling campaigns. In recent years they have been trying to 'sell' New York City as a summer resort. 'Spend your vacations in New York City.' (While New Yorkers go to the mountains and seashore to escape the sweltering heat of Manhattan).

"You go to New York City for your vacation. You go on shopping tours, which is the main idea behind the campaign. You spend more money than you can afford and, at the end of your stay, you discover, on being handed your hotel bill, that your room rent was \$8.40 a day. Of this amount the hotel keeps \$8 and turns over 40 cents to the City of New York as a 5% tax. You pay \$8.40 a day for the same room that five or six years ago cost you \$2.50, without tax.

"Most of the colleges that sponsor football are having a difficult time balancing their athletic budgets. Thirty-six colleges have abolished football in the last two years because the cost of production is too steep and the losses too great.

"Heap additional taxes on football and the result will be obvious.

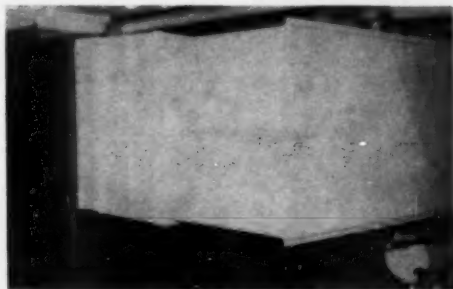
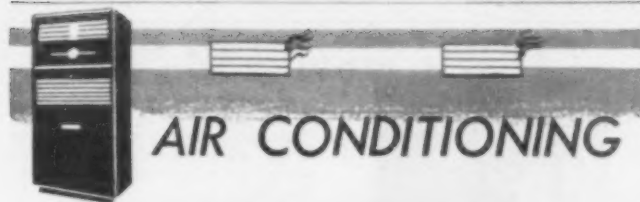
"How long can the increases in taxes continue? And the taxes on taxes, in duplicate and triplicate?

"Now the cities want to add to the Federal and State taxes. Every locality wants part of the tax loot.

"Any sound businessman could tell the governing bodies how they can reduce expenses and cut taxes but that is one thing the politicians don't want to know. It would be ruinous to them.

"One of these days the citizens are going to become very tired of being milked and their revolt will be long remembered."





15-TON PACKAGED unit located in the basement of dormitory of New Castle Motor Lodge helps motel meet stiff competition. Another 15-ton unit cools a second two-story dormitory and a 5-ton system takes care of the administration building.

## Motel Beats Competition

*Business Is So Good Because of Comfort Cooling  
Owner Plans To Open Another 45-Room Addition*

NEW CASTLE, Del.—Air conditioning in all of the 45 rooms as well as the administration building is featured in the newly opened New Castle Motor Lodge, one of the few motels in the East providing this type of comfort. Equipped with 45 rooms in two main buildings, patronage has been so heavy, largely as a result of this guest accommodation, that the management is planning to open another 45-room unit on its 6-acre plot.

### STRATEGIC LOCATION

The motel is located on the du Pont highway, well-traveled "gateway to the South" and is just north of the junction routes of highways 13 and 40 and 2½ miles south of the approach to the newly opened Delaware Memorial Bridge connecting the state with New Jersey. Motorists using the New Jersey Turnpike and the contemplated bridge across

Chesapeake Bay can cut their running time between New York City and Washington to about four hours.

Because of this choice site there is plenty of competition nearby from other motels and tourist courts, but New Castle Lodge has a trump card to offer in its air conditioning accommodations. This is called to the attention of passing motorists by a neon-lit sign below the identification signature.

### 3 UNITS CONTROLLED FROM CENTRAL BOARD

The system uses three refrigerated UsAirco Kooler-Aire units with one 15-ton package unit located in the basement of each of the two dormitories and one 5-ton unit for the administration building. All are automatically controlled from a board in the office.

Grilled air ducts in baseboard and upper walls in each of the guest

rooms and bathrooms provide filtered cool air. In the winter the system is converted to heating with fuel oil supplied from a 7,000-gal. tank.

Another advantage of this system, the motel points out, is the saving in water because the units use an evaporative condenser which recirculates water. This economy is appreciated even though the motel has its own water supply from two artesian wells on the ground. The 300-ft. deep wells pump water into each room with two hydrogen pumps capable of handling 100 g.p.m.

The air conditioning system was installed by Charles Simkin & Sons, Inc. of Perth Amboy, N. J., who worked with the architect, M. Arthur Wolf of the firm of Wolf & Gluckman, Newark, N. J.

Management is under direction of Lawrence German, head of a corporation which operates two other motels, Garden State Motor Lodge in Union, N. J. and Twin Lakes Motor Lodge, Paramus, N. J. The New Castle unit employs nine persons and is managed by a husband-and-wife team.

### 2-STORY DORMITORIES

Predominant feature at New Castle is the two-story architecture. There are eight upstairs rooms in each of the two buildings, or 16 in all. Principal advantage is that it assures a high degree of privacy for the guests since there are separate entrances leading down from a hallway in the back and front of each building. Many guests have expressed their preference for an upstairs room and it has been responsible for much repeat business.

The rooms which average 10 x 13 ft. in size, all have outside exposure

and cross ventilation, and were planned chiefly with comfort and eye appeal in mind. Rooms have upholstered chairs, foam mattresses and pillows, wall prints, venetian blinds, black ceramic tile window sash, Thermopane windows, and aluminum screens. Wall-to-wall carpeting is used and furniture is of metal steel.

Fire-resistant construction almost 100% throughout is a strong selling point. The only combustible material is the wood in the cross-beams. The structure is of reinforced concrete; outer walls of brick; floors and walls of cement block and reinforced concrete. A further safeguard is the mineral wool insulation of full thickness in the ceiling and walls which not only retards the spread of fire, but also makes the premises cooler in warm weather.

### UNITS HOUSED IN BASEMENT

In the basement is housed the air conditioning units and heating boiler. There is a crawl space for conduits, pipes, and other fixtures. There are also facilities for the help such as kitchen equipment for the maids where they can cook their meals and living quarters for the handy man, who has a workbench and tools close by which he can use for making minor repairs.

The administration building includes the registering office, living quarters for the manager and his wife, an extra guest room, and reserve rooms for the linens, soaps, and other accessories. The office is neat and attractive with Kentile floor covering in red, racks containing maps and promotional literature from other motels and hotels and a small stock of gifts which can be purchased by guests.

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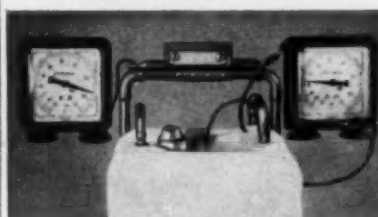
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useful information on new products.



## Liquid-charged expansion valves give you positive bulb control IN ANY POSITION



### Here's Proof



Dramatic proof of the efficiency of A-P Liquid-Charge. In the unit pictured above, there is a 54-degree temperature difference between valve and bulb, and the valve is mounted upside down! Despite these conditions, the bulb provides perfect control. Unusual? Yes; but typical of the efficiency and dependability you can expect from A-P Liquid-Charged Valves!

Here's an all-purpose valve serving every requirement . . . low temperature units, commercial applications, air conditioning. Select the capacity you need, install . . . and enjoy day-in, day-out dependable service.

Unusual applications are no problem when you install an A-P Liquid-Charged Expansion Valve. Install it upside down . . . at any angle . . . even lower than the bulb — in fact, in absolutely any required position, and in any ambient temperature. You are sure to get positive, precise control.

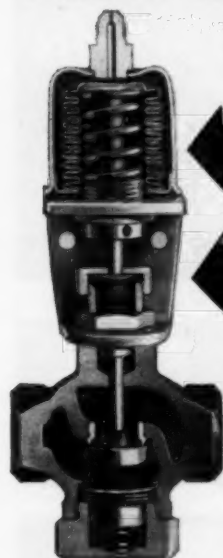
Manufactured to the highest standards of quality, every A-P valve has a rugged, leakproof, forged brass body and corrosion-resistant, stainless steel needle and seat. Power element is liquid-charged and all parts are silver soldered for durability. Yes, quality construction throughout to assure years of economical, trouble-free service.

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than twice the life of single-ply

Break-down tests prove that the Marsh-Electrimatic two-ply bellows has 2½ times the life of an equivalent one-ply bellows. This is because a single ply bellows must be made of heavier gauge metal . . . and naturally the heavier metal rapidly breaks down under the fatigue of flexing.

### Boot eliminates packing — friction

At one time the best way to eliminate packing was with a metal bellows, but this Neoprene boot has all the advantages of a bellows plus ten times its life. We have repeatedly proved this, too . . . by cycling the boot, without failure, under actual operating conditions ten

times as long as we could cycle the best metal bellows.

These are just two of the many features that make the Marsh-Electrimatic last longer and function better. They are typical of plus values found in the entire Marsh-Electrimatic line. Write us or see your wholesaler.

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### NEW PRODUCTS?

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## What's New

When requesting further information on new products, please use "Information Center" form.

### Infrared Table Broiler Has Fry, Grill Tray on Top



KEY NO. B-630

NEW YORK CITY—A new heating element which supplies triple the usual amount of infrared heat to the upper tray while retaining the full quota of heat for the rotisserie and broiler area is incorporated in the new "Broil-Quik Chef" introduced recently by the Broil-Quik Co. here.

This enables the housewife to grill or fry on the upper tray at the same time she barbecues, roasts, or broils, the company explained.

Lifting the top of the Broil-Quik Chef discloses a family size aluminum pan with detachable handle for grilling or frying.

The rotisserie unit comprises a spit and skewer which is revolved automatically at a fixed speed by a dependable a.c. motor. An added feature is the detachable, non-breakable spatter shield of chrome-plated steel.

By removing the spit and skewer, the appliance becomes a fast infrared broiler with six levels for broiling foods rare to well done. A Kool-Grip handle on the broiling pan folds in when not in use. The wide open front imparts an outdoor-grilled flavor.

The Broil-Quik Chef is made of heavy gauge steel, triple chrome plated. Complete with cord and plug, its retail price is \$59.95.



### Plastic Superstructure Crowns Schaefer Cabinet

KEY NO. B-631

MINNEAPOLIS—Two new frozen food display cabinets, one an open top unit with 12-cu. ft. capacity and the other a glass front, open top unit with 16-cu. ft. capacity, were introduced recently by Schaefer, Inc. here.

The model FO-12 has three coil refrigerated partitions with removable frost shields and holds 437 standard frozen food packages. The open top, measuring 16½ by 43½ in., is crowned by a "glowing" white plastic superstructure with raised, red plastic lettering.

The superstructure floodlights the interior of the cabinet with fluorescent light and captures customer attention from anywhere in the store, according to Schaefer officials. A channel for product-price strips runs the full length of the cabinet.

Designed by Brooks Stevens, noted industrial designer, the all-steel constructed cabinet has a stainless steel top, a wide flanged base with no sharp edges, and a heavy galvanized steel tank.

The compressor is a ½-hp. hermetically sealed type. There is a one-year warranty on the complete cabinet with an additional four-year warranty on the compressor body available at a small additional cost.

By putting the cabinet on casters, available at slight additional cost, it can be used as a spot merchandiser. Or it can be used for multiple installation in a wall lineup. Outside dimensions are 51½ in. long, 30½ in. wide, and 51 in. high, including superstructure.

## JARROW

The Outstanding Name for...

REFRIGERATOR  
DOOR GASKETS  
AND ACCESSORIES

Supplied by Wholesalers Everywhere

JARROW PRODUCTS  
830 NO. LA SALLE ST. CHICAGO 12

### Lamp Makes Possible 'Sunbathing' at Home

KEY NO. B-633

BLOOMFIELD, N. J.—Any room in the house can be turned into a "sunbathing beach" through use of its new fluorescent sunlamp, reports the Lamp Div. of Westinghouse Electric Corp.

This can be accomplished, Westinghouse says, when the tubular lamp is mounted in a portable fixture which plugs into any regular electrical outlet.

The lamp contains a special suntan phosphor. It recreates the same invisible ultraviolet radiations found in sunlight, according to the manufacturer.



### Dehumidifier Designed As Piece of Furniture

KEY NO. B-634

CICERO, Ill.—Designed as a piece of furniture rather than a metal appliance, a "Dryaire" dehumidifier for home and office use has been announced by Nye Mfg. Co. here.

The cabinet is finished in rich mahogany to harmonize with home furnishings, and has a Formica plastic top. It measures 24 in. high, 21 in. long, and 14½ in. wide.

The Dryaire's electric refrigeration system cools and condenses excess moisture from room air and collects it in a pail, or a permanent drain may be installed by the purchaser, the manufacturer explained. The company stressed that installation is simple and that there are "no valves to open—no parts to adjust."

According to Nye, the unit is designed for any closed room up to 10,000 cu. ft. The dehumidifier operates on 110-115 volts a.c., 60 cycles or 50 cycles.

### S. & R. Introduces New 5-Gal. Creamer Unit

KEY NO. B-632

NEW YORK CITY—S. & R. Soda Fountain Mfg. Co. here has announced availability of its new model 841, a 5-gal. creamer unit.

Measuring 42 in. by 31 in., the self-



contained unit includes compressor and carbonator.

Model 841 also has three syrup jars and pumps, one single chocolate jar and pump, three crushed fruit jars over the bottle storage compartment, stainless steel covers over the 5-gal. ice cream storage and bottle storage.

## for all water cooling -- use Filtrine —sell more condensing units

### "DO" Orders are Vital!

For all Federal Agencies . . . All Armed Services . . . Filtrine products meet government specifications. Promote your own condensing unit sales with Filtrine's 20-year-life construction . . . high capacity . . . Super Storage . . . more than 40 years' dependability.

#### COOLERS FOR MESS HALLS — CAFETERIAS



Sell your condensing unit with Filtrine Stainless Steel or Duro finished cabinets, equipped to suit with top/side shelves, bubblers, glass-filters. Can be Taste-Master equipped to remove chlorine, rust, sediment from water.

#### COOLERS FOR X-RAY & PHOTOGRAPHY

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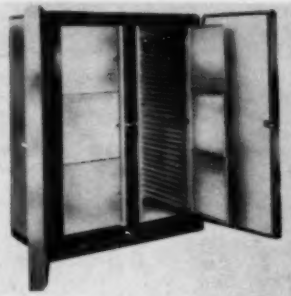
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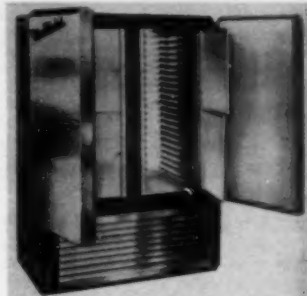


## What's New (Cont.)

### New 'Sta-Kold' Uprights Have Automatic Defrost



47-Cu. Ft. Remote Freezer



35-Cu. Ft. Self-Contained Freezer

KEY NO. B-635

PHILADELPHIA—Two new upright freezers featuring automatic defrost have been added to its "Sta-Kold" line, according to Victory Metal Mfg. Corp. here.

Incorporating all the important features of Sta-Kold refrigerators,

the new freezers also have Kramer "Thermo-Banks" and are equipped with bakers' racks and wire shelves, and stainless steel heavy-duty freezer doors, the company reported.

One model is a 35-cu. ft., two-door, self-contained unit and the other is a 47-cu. ft. two-door remote freezer.

### Rack Sells Frozen Food Packaging Materials



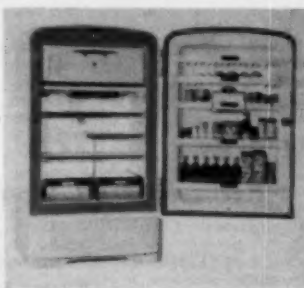
KEY NO. B-636

CINCINNATI—A new merchandise dispenser designed specifically to sell frozen food packaging has been introduced by The Mehl Mfg. Co. here.

Functioning as a free standing display, the "See-Safe" merchandise dispenser is 22 in. wide, 20 in. deep, and 50 in. high. It is of heavy wire construction and is finished in colorful enamel with a large self-selling sign attached.

Any merchant purchasing a standard supply of See-Safe frozen food packaging products is furnished a dispenser without extra cost. See-Safe products include all packaging materials used in home freezing and storing of fruits, vegetables, etc.

Various sizes are available in plastic bags, cellophane bags, and hot-waxed freezer cartons, also, multi-purpose plastic freezer boxes and roll wrappings.



### Crosley Bows Deluxe 9-Cu. Ft. Refrigerator

KEY NO. B-637

CINCINNATI—A 9-cu. ft. deluxe model Shelvador refrigerator, said to embody more features than any competitive model comparably priced, was announced recently by the Crosley Div., Avco Mfg. Corp.

In addition to the regular Shelvador features, the new Model DMD-95 includes a freezer compartment holding 50 lbs. of food; an electrically heated, removable butter safe with six temperature settings; clear plastic meat holder; chrome finish interior trim, seasonal control which regulates circulation between the freezer and food compartment to reduce humidity in hot weather; "tilt-out" ice trays, and an ice tray cover.

Cold control in the freezer compartment has a range of 10 settings to provide any degree of cold needed for storage or fast freezing.

The DMD-95 carries a suggested retail price of \$39.95.

### NuTone Kitchen Fan Easy To Remove and Clean



KEY NO. B-638

CINCINNATI—NuTone, Inc. here has introduced a new 8-in. kitchen fan which can easily be removed and cleaned, according to the manufacturer.

Motor and aluminum blade are mounted on a three-point bracket which slips in and out of the housing. Rubber tips snap over the studs to hold the unit in place. A large thumb screw which attaches to the motor holds the removable grille in place.

The ventilator can be mounted in the ceiling or on an inside wall or installed in the ceiling. Only 3½ in. deep, the housing will fit between standard 16-in. center joists or studs.

The unit comes assembled with motor, blade, housing, and grille,

according to the manufacturer. Accessories include an elbow tube and outside wall cap.

Price of the fan is \$26.50, or \$28.50 with chrome finish.

### New Dispensing Counter Cabinet Has Formica Top



KEY NO. B-639

GRAND RAPIDS, Mich.—A new ice cream dispensing counter cabinet, called the "EZL," has been introduced by Grand Rapids Cabinet Co.

The cabinet is of all-steel body construction and has a stainless steel work top with rolled rim. There are also a stainless steel facing on the operators side and stainless steel, drip-proof lids. The Formica counter top is 10 in. wide.

Adjustable legs hold the cabinet 3 in. off the floor. The cabinet is regularly furnished with a stainless steel dipper well. It may be had with either one or two-color porcelain facings.

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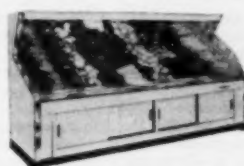
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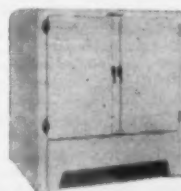
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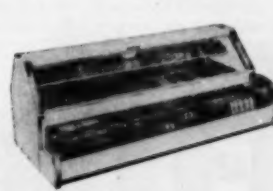
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# Refrigerant Characteristics

**Williams of Kinetic Warns Against Converting Systems to 'F-22'**  
**Because Each Machine Has Been Designed for a Particular Refrigerant**



PHILADELPHIA — Bounding a warning against converting to "Freon-22" refrigeration systems designed for other refrigerants, R. L. Williams of Kinetic Chemicals Division of du Pont offered many useful suggestions on the application and maintenance of "Freon-22" systems in his discussion "Freon-22 from an Installation & Servicing Viewpoint" presented before the recent Refrigeration & Air Conditioning Conference here.

"Freon-22" has found its way into hundreds of thousands of pieces of equipment ranging in size from fractional horsepower, hermetically sealed and open type units to large units of 100 hp. and over, Williams explained. Its characteristics are such that evaporator temperatures of -75° F. and lower can be obtained without the attendant difficulties of operating with low vacuums.

"Freon-22" is considered as a medium pressure refrigerant, having pressure-temperature characteristics similar to those of ammonia. Since "Freon-22" is a medium pressure, safe refrigerant, it is suitable and is being used in air conditioning applications including window type, console type, and packaged air conditioners.

Early equipment using "Freon-22" was modified "Freon-12" equipment. Later, however, equipment was designed basically around "Freon-22" and is being produced and sold in volume today.

## Substituting One Refrigerant For Another

It is important that every one should recognize that there are no two refrigerants exactly alike, Williams pointed out. Each refrigerant has very definite properties with respect to pressure-temperature-volume relationship, heat values, density, molecular weight, boiling point, freezing point, electrical properties, solvent properties, effects on metals, and safety characteristics, as well as others.

These, as well as other factors, must be taken into consideration by the designers of equipment in selecting one refrigerant or another, to design a product which will be dependable, give the required performance, be of proper size and weight, be safe, render long life and give years of satisfactory service to the user with a minimum of maintenance and repair, and yet be attractively priced to the consumer.

"In considering all of the factors involved, it is our conclusion that the substitution of one refrigerant in place of another can be the cause for many difficulties, especially if this is done without regard for the differences and effects they can have on

**Table I—Characteristics of Refrigerants**  
(Standard Ton Conditions)

	"Freon-12" CCl <sub>2</sub> F <sub>2</sub>	"Freon-11" CCl <sub>3</sub> F	"Freon-21" CHCl <sub>2</sub> F	"Freon-22" CHClF <sub>2</sub>	"Freon-113" CClF <sub>2</sub> -CCl <sub>3</sub> F	"Freon-114" CClF <sub>2</sub> -CCl <sub>2</sub> F <sub>2</sub>	Carbon Dioxide CO <sub>2</sub>	Am- monia NH <sub>3</sub>	Methyl Chloride CH <sub>3</sub> Cl	Sulphur Dioxide SO <sub>2</sub>	Methylene Chloride CH <sub>2</sub> Cl <sub>2</sub>
Boiling Point (1 atm.) °F.....	-21.6	74.7	49.0	-41.4	117.6	38.4	-108.4	-28.0	-10.78	14.0	103.7
Gauge Pressure lbs./sq. in. 86° F.....	93.2	3.58	16.53	159.8	*13.93	21.99	1024.3	154.5	80.00	51.75	*9.44
Gauge Pressure lbs./sq. in. 5° F.....	11.81	*23.95	*19.25	28.33	*27.92	*16.14	318.7	19.57	6.46	*5.87	*27.53
Heat Content of Saturated Vapor In 5° F. Evaporator—B.t.u./lb.....	78.79	92.88	119.97	105.56	79.60	72.21	102.14	613.35	196.92	183.49	163.8
Heat Content of Liquid Leaving 86° F. Condenser—B.t.u./lb.....	27.72	25.34	30.56	36.28	25.93	29.11	45.45	138.9	46.67	42.12	29.75
B.t.u. Refrigerating Effect Per Lb.	51.07	67.54	89.41	69.28	53.67	43.1	56.69	474.45	150.25	141.37	134.05
Pounds of Refrigerant Per Min.....	3.916	2.961	2.237	2.887	3.726	4.64	3.528	.4215	1.331	1.414	1.492
Cubic Foot of Liquid Per Lb. 86° F.	.0124	.01094	.01183	.01363	.01031	.01112	.0267	.02691	.01778	.01184	.01198
Cubic Inches of Liquid Per Min.....	83.9	55.98	45.73	67.97	66.48	89.16	162.8	19.6	40.89	28.9	30.88
Cubic Feet of Vapor Per Lb. 5° F.	1.485	12.27	9.132	1.246	27.04	4.221	.2673	8.150	4.471	6.421	49.9
Cubic Feet Compressor Displacement Per Minute.....	5.815	36.33	20.427	3.596	100.764	19.587	.943	3.436	5.95	9.084	74.45
B.t.u. Refrigeration Per Min. Per Cu. Ft. Compressor Displacement	34.4	5.5	9.79	55.80	1.987	10.22	212.0	58.2	33.6	22.0	2.686
Critical Temperature °F.....	232.7	348.4	353.3	204.8	417.4	294.3	87.5	271.2	289.6	314.8	421
Critical Pressure—lbs./sq. in. abs.....	582.0	635.0	750.0	716.0	495.0	474.0	1071	1651	969	1142	640
Freezing Point °F.....	-252.0	-168.0	-211.0	-256.0	-31.0	-137.0	-69.9	-108	-144	-99	-143
Underwriters' Laboratories Group No.....	6	5	Between 4 and 5	5	Between 4 and 5	6	5	2	4	1	Between 4 and 5
Flammable or Explosive.....	No	No	No	No	No	No	No	Yes	Yes	No	No

\*Inches of mercury below atmosphere.

systems not designed for the refrigerant employed," Williams said.

Once the designer has selected a given refrigerant and designed a unit specifically around that refrigerant, only that refrigerant should be employed in the unit if the best results are to be realized, the Kinetic official declared. "Freon-22," therefore, is not to be considered as a substitute for equipment designed for either "Freon-12" or ammonia or other refrigerants.

## Comparative Pressure-Temperature Relationships of Refrigerants

In comparing a number of refrigerants for their pressure-temperature characteristics, it becomes obvious that, of those materials shown, there are no two having exactly the same pressure-temperature relation, Williams said.

In a study of these relationships in the temperature range -40° F. to plus 250° F., it will be noted that while "Freon-22" has a slightly higher pressure than ammonia in the temperature region below approximately 100° F., above this temperature "Freon-22" is lower in pressure than ammonia.

To more clearly understand some of the differences between "Freon-22," "Freon-12," and certain other refrigerants,

there is tabulated in Table I the "Characteristics of Refrigerants." For this comparison standard ton conditions of 86° F. condenser temperature and 5° F. evaporator temperature have been selected.

In comparing "Freon-12," ammonia, and methyl chloride it is found that:

### Boiling Point

"Freon-22" has a boiling point at atmospheric pressure of -41° F., approximately 20° lower than that of "Freon-12," 13° lower than that of ammonia, and 30° lower than that of methyl chloride.

Having a lower boiling point, "Freon-22" is suitable for systems where lower temperatures are required, being ideally suited for the range from -25 to -75° F.

### Pressures

Attendant with lower boiling point, somewhat higher pressures would be expected. Table II shows the operating pressures of 11 refrigerants at 86° F. and 5° F. as well as their compression ratio.

At 86° F., the gauge pressure in pounds per square inch of "Freon-22" is 159.8, while for "Freon-12" it is 93.2, ammonia 154.5, and methyl chloride 80.0.

At 5° F., the gauge pressure in p.s.i. of "Freon-22" is 28.3, "Freon-12" 11.81, ammonia 19.57, and methyl chloride 6.46.

The question most frequently asked of Kinetic by the serviceman or installer, Williams says, is, "Can I use 'Freon-22' in a 'Freon-12' machine?" With this question in mind, the following must be considered before such a change is made:

Since "Freon-22" has a somewhat higher pressure than "Freon-12," consideration must be given to the ability of the various parts of the system such as the compressor body, cylinder heads, condenser, evaporator, piping, etc. to withstand these pressures.

### Bearing Loads, Safety Devices and Controls

Within the compressor, connecting rod and crankshaft bearings are subject to greater loads due to higher pressures of "Freon-22" and the machine may not have sufficient bearing surface area. Safety relief devices, low and high pressure cutouts, and volume of receiver may be inadequate or need replacement or adjustment.

### Motor, Condenser, and Evaporator

A standard "Freon-12" compressor operating at its usual speed, and charged with "Freon-22," would overload the motor and condenser approximately 60%, presuming both motor and condenser were not oversized originally. The evaporator de-

signed for "Freon-12" would generally be undersized.

### Expansion Valve or Orifice Sizes

The expansion device controls the quantity of liquid refrigerant circulated or expanded. A comparison, showing the quantity of liquid refrigerant to be circulated or expanded under standard ton conditions for 11 refrigerants, including "Freon-12" and "Freon-22" is shown in Table III:

In comparing the number of pounds of refrigerant to be circulated per minute under standard ton

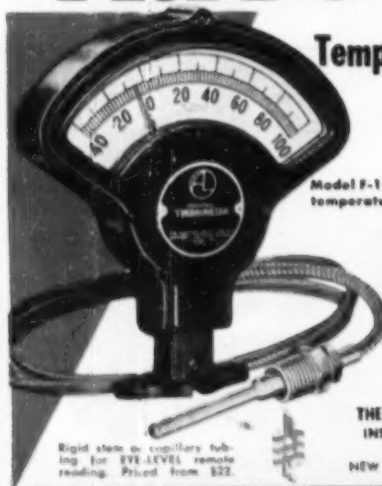
conditions, Table III shows that for "Freon-22" 2.887 pounds are required as compared with 3.916 for "Freon-12"; therefore the expansion device must be set to meter the proper amount of liquid.

Since the amount of refrigerant evaporated per minute and the refrigerating effect per pound of refrigerant varies between refrigerants, expansion valves or capillary tubes, used in "Freon" systems, must be properly sized. Obviously an orifice designed for a "Freon-12" system will be too large for a "Freon-22" system.

(Concluded on next page)

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Table II—Operating Pressures

Refrigerant	(Standard Ton)		Compression Ratio
	Pressure P.s.i.g. 86° F.	Pressure P.s.i.g. 5° F.	
Carbon Dioxide	1024.3	319.7	3.11
"Freon-22"	156.8	28.33	4.045
Ammonia	154.5	19.57	4.94
"Freon-12"	93.2	11.81	4.075
Methyl Chloride	80.0	6.46	4.48
Sulphur Dioxide	51.75	* 5.87	5.63
"Freon-114"	21.99	*16.14	5.42
"Freon-21"	16.33	*19.25	5.96
"Freon-11"	3.58	*23.95	6.24
Methylene Chloride	* 9.44	*27.33	8.57
"Freon-113"	*13.93	*27.92	8.01

\*Inches mercury below one atmosphere.

Table III—Quantity Liquid Refrigerant Circulated or Expanded

Refrigerant	(Standard Ton)		Cu. In. Liquid Expanded Per Min.	Specific Gravity Liquid 86° F. (Water = 1)
	Pounds Expanded Per Min.	Cu. Ft./# Liquid 86° F.		
Carbon Dioxide	3.528	.0267	162.8	.602
"Freon-22"	2.887	.01363	67.97	1.177
Ammonia	.4215	.02691	19.6	.598
"Freon-12"	3.916	.0124	83.9	1.297
Methyl Chloride	1.331	.01778	40.89	.808
Sulphur Dioxide	1.414	.01184	28.9	1.358
"Freon-114"	4.64	.01112	89.16	1.443
"Freon-21"	2.237	.01183	45.73	1.360
"Freon-11"	2.961	.01094	55.976	1.468
Methylene Chloride	1.492	.01198	30.88	1.340
"Freon-113"	3.726	.01031	66.48	1.555

## Refrigerant Characteristics--

(Concluded from preceding page)

The factor of compressor displacement and B.T.U. refrigeration per cu. ft. of compressor displacement is one that has stimulated installation and servicemen, as well as others, to substitute "Freon-22" for the purpose of obtaining increased refrigeration capacity, says Williams. Unfortunately, he stated, many of the other items for consideration, as explained herein, have been overlooked in making the change.

Without going into the details of compressor design, which neither the installer nor the serviceman can alter, "Freon-22" offers the possibility of increasing the capacity of a "Freon-12" compressor approximately two-thirds more with the same bore, stroke, and speed, or maintain the same refrigeration capacity by reducing the speed of the "Freon-12" compressor charged with "Freon-22" in the order of 40%.

### Lubrication

The behavior of "Freon-22" and mineral lubricating oil differs from that of "Freon-12." "Freon-12" is completely miscible with mineral lubricating oil over the complete range of temperatures employed in refrigeration and air conditioning equipment. "Freon-22" is also miscible with oil in the high temperature side of the system, but at the lower temperatures existing in the evaporator, two layers are formed, with the mineral oil floating on top of the liquid "Freon-22."

The formation of these layers, or oil separation point, depends on several factors, i.e., the temperature, per cent oil in the liquid "Freon-22," and the particular oil used, viscosity, and molecular weight of the oil.

Oil separating from the refrigerant is not new to the industry as this same characteristic was found when sulfur dioxide or ammonia were used. Many times the use of a lower viscosity oil suitable for satisfactory compressor operation will permit good oil return. Other times, the installation of a good oil separator between the compressor and the con-

denser, and as close to the cylinder head as possible, will prevent oil, in sufficient quantity to be detrimental, from passing through the system.

Where the system is required to operate at low temperature, an oil should be selected which has been sufficiently dewaxed so that wax will not separate from the oil at the lowest operating temperature of the system, when the oil is in solution with the liquid "Freon-22."

### Solubility of Water

The solubility of water in "Freon-22" is many times that of the solubility of water in "Freon-12." Solubility relationships between refrigerants and water are related and vary, among other things, with temperature. In general, as the temperature of the "Freon" refrigerants is lowered the solubility of water in them is lowered. The reverse is also true, i.e., as the temperature of the "Freon" refrigerants is increased, it has the ability of holding more water. Table IV shows the solubility of water in liquid "Freon-12" and "Freon-22" expressed in per cent by weight and parts per million over the range of temperature minus 100° F. to plus 100° F.

From Table IV, and as an example showing the water solubility relationship between "Freon-12" and "Freon-22," at 0° F. (\*) the solubility of water in liquid "Freon-12" is 8.3 parts per million, whereas for "Freon-22" it is 308 parts per million, or approximately 38 times the amount.

Similarly, at -40° F. (\*\*) more than 70 times the amount of water is soluble in "Freon-22" than in "Freon-12."

It is probably this characteristic that is of major significance when considering that few, if any, "Freon-22" systems, assuming normal drying precautions are taken, have caused difficulty from moisture freezing at the expansion device.

### Drying Systems

It is not to be assumed that systems using "Freon-22" as the refrigerant need not be kept as dry as

systems charged with "Freon-12." Williams declared. Small amounts of water present in a system operating satisfactorily with "Freon-12," may, when "Freon-22" is substituted, accompanied by much lower operating temperatures, freeze out as crystals.

This can be explained by the fact that while "Freon-22" may hold in solution more water than "Freon-12" at a given temperature, the amount of water being circulated in the system at the lowered temperature may be more than the "Freon-22" can hold at that temperature. Such water, not in solution with the refrigerant or oil, would be "free water," and could cause freeze-ups, dilution of the lubricating oil, corrosion of the metals, and short circuiting in hermetically sealed units of the motors.

For these reasons, "Freon-22" systems, or any refrigerating system, must be kept dry to insure dependable service and long life.

By heating the refrigeration system to 230° F., passing hot dry air through it and evacuating to 29 in. of mercury, a suitable dry system will result. Cartridge type driers containing activated alumina, silica gel, or calcium sulfate, are suitable for use with "Freon-22" systems and are an excellent supplement in maintaining dry systems. In heating the refrigeration system, do not resort to an open flame or blow torch.

### Leak Detection

A leak of "Freon-22" vapor can be definitely located by means of a Halide torch or lamp by the same method used for other of the "Freon" refrigerants. Rate of leakage of vapor is related to the molecular weight of the particular material, with the higher molecular weight gases less difficult to hold than the lower molecular weight gases. Other factors influencing rate of leakage are pressure, capillarity, viscosity, density and rate of diffusion.

A very good measure of the rate of leakage may be expressed as being inversely proportional to the square root of molecular weight, assuming the pressure to be the same in all cases. Table V shows comparative rates of leak of several refrigerants, all based on the same pressure.

Where seals, gaskets, or rubber or synthetic rubber materials are used in machinery where the refrigerant and oil are in contact with them, such materials must be selected not only for their mechanical and insulating properties but also for their ability to withstand the effect which either the refrigerant or oil will have on them in service, explained Williams. Compounded synthetic rubbers, for example, contain plasticizers, softeners, fillers and vulcanizing agents as well as base elastomer.

In considering swelling alone, where "Freon-22" is used, Buna N shows a linear swelling of 26%, corresponding to a volume increase of 100%, hence it is necessary to consider if the physical strength of Buna N in the swollen condition is satisfactory for the purpose intended. On the other hand, Neoprene type GN has the required mechanical strength with a linear swelling of only 2.4%, corresponding to a volume increase of about 7.5% which is quite acceptable.

Obviously, solvent extraction effect, swelling, or shrinkage, along with other properties, including the effect of the oil, must be considered in selecting the proper material for use as a gasket or seal in "Freon-22" systems, Williams said.

A system designed for "Freon-12" and charged with "Freon-22" may not have a suitable gasket or seal, may swell or shrink, or be damaged, thus causing difficulty. For the reasons stated above, seals, gaskets, and similar rubber or synthetic rub-

Table IV—Solubility of Water In Liquid "Freon-12" and "Freon-22"

(Percent by Weight—Parts Per Million)

Temperature °F.	"Freon-12"		"Freon-22"	
	% by Wt.	Parts Per Million	% by Wt.	Parts Per Million
100	.0165	165	.1800	1800
90	.0128	128	.1580	1580
80	.0098	98	.1350	1350
70	.0076	76	.1140	1140
60	.0058	58	.0970	970
50	.0044	44	.0830	830
40	.0032	32	.0690	690
30	.0023	23.3	.0573	573
20	.0016	16.6	.0472	472
10	.0011	11.8	.0384	384
0*	.00083	8.3	.0308	308
-10	.00067	6.7	.0244	244
-20	.00058	5.8	.0196	196
-30	.00052	5.2	.0152	152
-40**	.00017	1.7	.0120	120
-50	.00011	1.1	.0091	91
-60	.00007	.7	.0068	68
-70	.00004	.4	.0050	50
-80	.00003	.3	.0037	37
-90	.00001	.1	.0027	27
-100	.00001	.1	.0019	19

Table V—Leak Detection

Refrigerant	Molecular Weight	Square Root of Molecular Wt.	Rate of Leak (Same Pressure)
"Freon-113"	187.4	13.7	.80
"Freon-114"	170.9	13.1	.84
"Freon-11"	137.4	11.6	.95
"Freon-12"	120.9	11.0	1.00
"Freon-21"	102.9	10.2	1.08
"Freon-22"	86.4	9.3	1.18
Methylene Chloride	84.9	9.2	1.20
Sulphur Dioxide	64.1	8.0	1.38
Methyl Chloride	50.5	7.1	1.55
Carbon Dioxide	44.0	6.6	1.66
Air	29.0	5.4	2.04
Ammonia	17.0	4.1	2.66

ber materials must be selected for the specific refrigerant and oil.

A complete study of the Effect on Elastomers of "Freon" and Other Halo-hydrocarbons was made by Dr. B. J. Eismann, Jr., of "Kinetic" Chemicals, and this work was published in December, 1949, issue of *Refrigerating Engineering*. Reprints are also available.

### Electrical Properties

A refrigerant must have a high electrical resistance to permit its use in hermetically sealed units where the motors are exposed to the refrigerant. "Freon-22" is in a class of non-conductors of electricity, similar

to the other "Freon" refrigerants. The relative dielectric strength of "Freon-22" is 1.3 times that of dry nitrogen.

In conclusion Williams said that: "Freon-22" should not be substituted in a refrigeration system not properly designed for it. Motor overloading, condenser overloading, inadequate evaporator surface, insufficient bearing surface, improper lubrication, inadequate controls, safety devices, and improper gaskets and seals, as well as the higher pressures involved, must be considered.

The condensing unit manufacturer is in the best position to determine whether "Freon-22" can be used in their product.

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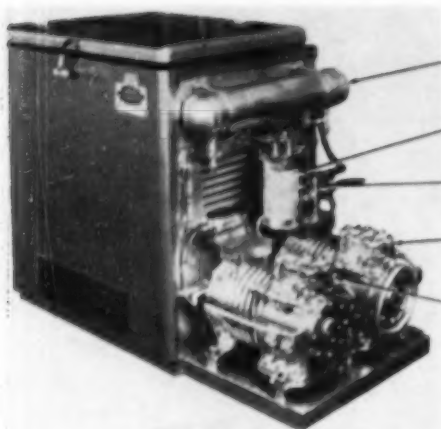
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Water  
Valve  
"Freon-22"  
Unit  
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Unit

SPECIAL STEEL TOOLS last much longer after "freezing" at -120° F. in unit built by Conrad Industrial Coolers which employs Freon-22 and Freon-13 in cascade system, shown here with machine compartment cover removed.

## 'Freezing' of Tools at -120° F. Prolongs Life, Insures Quality

HOLLAND, Mich. (How "freezing" of steel tools at temperatures as low as -120° F. prolongs their life has been demonstrated at Hart and Cooley Mfg. Co. here, according to Charles Conrad, producer of various types of industrial cooling equipment.

Before treatment at low temperature was employed, the special punch dies used by the firm for cold forming of shell casings from steel were good for about 2,000 pieces before

breaking, according to Conrad.

After "freezing," however, the punch dies last for 15,000 times, and in some cases as much as 25,000 times.

"Freezing makes the steel of better quality, harder, and longer lasting," Conrad said. "This is especially noticeable when the tools are being used right up to the last limit of endurance for a difficult forming process like the one employed at Hart and Cooley."

The -120° F. cooler built by Conrad for this application is a 4-cu. ft. self-contained model powered by cascade system employing "Freon-22" and "Freon-13" as the refrigerants and two Copeland compressors. Thermostatic expansion valves are used on both systems, and an oil separator is employed on the "Freon-13" discharge.

The "Freon-22" unit is water cooled with a Halstead-Mitchell condenser.

## INDUSTRIAL applications



HOME FREEZER at left provides closely controlled cold air to test insulation value of fabrics at U. S. Department of Agriculture laboratory.

## Fabric Testing Process

U. S. Dept. of Agriculture Uses Conventional Home Freezer To Test Thermal Properties of Textiles

NEW ORLEANS—How a conventional 8-cu. ft. home freezer has been adapted to test the effectiveness of textile fabrics in helping the human body keep warm despite cold, wintry blasts was recently described for the textile industry by two scientists of the U. S. Department of Agriculture.

"Warmth, an important service requirement of many textile fabrics, is a difficult property to evaluate," say John D. Tallant and Ruby K. Worner of the Southern Regional Research Laboratory of USDA's Bureau of Agricultural and Industrial Chemistry, writing in the *Textile Research Journal*.

So the apparatus incorporating the freezer was designed at the laboratory here to rank the insulating value of textiles, particularly experimentally developed cotton fabrics.

"This apparatus measures the heat transferred during a fixed time interval from an aluminum cylinder maintained at approximately body temperature in an atmosphere of moving air of approximately freezing temperature, with and without the cylinder covered with a sleeve of the test fabric," explain the authors. "The difference in energy values is taken as the measure of the insulation value of the fabric."

By using the freezer in a room at about 75° F., an air temperature of approximately 32° can be maintained inside the freezer despite the 200 watts of heat produced by the resistance heaters during tests. Relative humidity runs about 30%.

Within the freezer a 1/20-hp. blower fan has its outlet connected to a sheet metal tank 15 in. wide by 34 in.

long by 5 in. deep, which in turn is connected to a sheet metal tube 7 1/2 in. in diameter painted black inside and out. The blower normally maintains a wind velocity of 12 to 13 m.p.h. although lower velocities can be obtained by reducing the inlet area of the fan.

The aluminum cylinder with or without its sleeve of fabric to be tested is inserted into the sheet metal tube contained in the freezer through an opening cut in the lid of the freezer.

Test cylinder is of solid aluminum 12 in. long and 4 in. in diameter. Heat is supplied by six cartridge-type resistors, each 4 in. long, inserted into holes drilled into the end.

Temperature of the cylinder is measured and controlled by means of an iron-constantan thermocouple located midway in a hole drilled along the length of the cylinder and 1/4 in. from the surface. The lower end is insulated with 1-in. thick fiberboard and the upper end with mahogany 6 in. thick.

Air stream temperature is also measured and controlled by a thermocouple inserted in the air stream just below the aluminum cylinder and shielded against radiation from the heated cylinder.

The thermocouples are connected to a Brown potentiometer which controls, measures, and records the temperatures of both the warm cylinder and the surrounding air temperature.

Other instruments on the test apparatus include a draft gauge to measure air velocity and a watt-hour meter to measure the energy required to maintain the aluminum test cylinder at a constant temperature.

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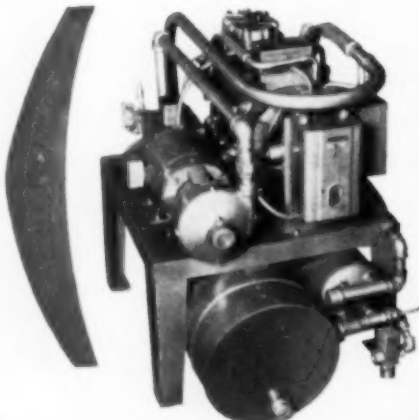
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## BASIC REFRIGERATION CONTROLS

By Service Information Division,  
White-Rodgers Electric Co.

### 12—Location of Bulb Controls Ice Thickness



FIG. 22—This control maintains ice bank at desired thickness.

The ice bank control shown in Fig. 22 is unusual and has been especially designed for use on refrigeration cabinets, such as milk coolers, where an ice bank is built up as a means of storing refrigeration.

The purpose of the control is to maintain the desired thickness of the ice bank. This is accomplished by the control starting and stopping the condensing unit.

There are no adjustments necessary on this control. It is only necessary to properly locate the feeler bulb to obtain the desired thickness of the ice. The differential of this control is set to maintain the ice bank thickness to within approximately  $\frac{1}{16}$  in. of the desired thickness.

This control does not have a dial for you to set, as you will find on other White-Rodgers controls. However, the switching mechanism of this control is the same as that found in the other controls that we have been discussing.

When you look at this control, you see that it has a temperature sensitive element, or feeler bulb. Actually this bulb consists of an outer casing and an inner bulb. Between the outer casing and the inner bulb there is a liquid. In the inner bulb there is another liquid.

The expansion or contraction of the liquid in the space between the inner bulb and the outer bulb causes the inner bulb to expand and contract.

The expansion and contraction of the inner bulb gives us the force that is necessary to operate the switching mechanism.

As in the other controls that have been previously discussed, it is the expansion of the liquid against the diaphragm, and in turn the diaphragm against the switching stud, that causes the switch to operate.

The expansion and contraction of the liquid between the inner bulb and the outer bulb is a constant and occurs at a definite temperature. Thus, when the ice bank builds up to a point where the external bulb is covered by an approximate  $\frac{1}{16}$  in. of ice, the temperature of the ice will cause the control to operate, or function.

The feeler bulb may be located in any position—vertical, horizontal, or at any angle. The feeler bulb should be below the water level and at a location that is about midway between the inlet and the outlet of the evaporator coils or plates. The bulb should be located in a relatively secluded spot where it will not be damaged by product loading or unloading.

In building a bracket for the feeler bulb, where it is attached to the evaporator, we suggest the use of a rustless material such as stainless steel or copper. The brackets that are used should be either fastened to the capillary, or be loose enough so that they do not deform the bulb.

(To Be Continued)

### Dubin and Associates Opens Office In Florida

ST. PETERSBURG, Fla. — A permanent Florida office is being opened here by Fred S. Dubin and Associates, consulting engineers in the fields of air conditioning, heating, plumbing, and electrical work.

The firm makes its services available to architects and governmental agencies for surveys, reports, design plans and specifications, and supervision of mechanical and electrical systems for homes, churches, schools, public institutions, commercial, and industrial buildings.

### Tyler Fixture Names Sheldon Rutter Design, Styling Consultant

NILES, Mich. — Tyler Fixture Corp.'s appointment of Sheldon M. Rutter as design and styling consultant has been announced by R. L. Tyler, president.



S. M. Rutter

An Evanston, Ill. industrial designer, Rutter will undertake a long-range functional and appearance design program on the refrigeration equipment manufactured by all Tyler plants.

Rutter will be active in connection with "HarderFreez" and Wilson home freezers which are built by Tyler subsidiaries who manufacture this type of equipment.

Prior to establishing a business in Evanston, Rutter was a creative designer in the General Motors styling section and was affiliated with several other prominent organizations in New York, Detroit, and Chicago. He has had extensive experience in the design of many types of products, including freezers, refrigerators, air conditioners, TV cabinets, and kitchen cabinets.

### McDaniels Names Mattinson

GULFPORT, Miss. — Tom Mattinson has been appointed sales manager for McDaniels Refrigeration Sales & Service here, according to the company.

## SLANTS on Service

### Magnet Retrieves Parts

A handy thing to have around the shop or in your tool box is a horseshoe magnet on a string. This may be used to get small things out of hard-to-get-at places, such as a nut that has fallen in the crankcase of a compressor.

### How To Keep Ice Trays From Sticking to Shelf

There are many ways to keep an ice tray from sticking to the shelf of the evaporator but the one that has been found to be the most successful is this:

Wipe the tray dry on the outside, then rub the bottom of the tray with paraffin such as you get from the top of a glass of jelly or jam. The paraffin does not freeze and you have a stick-proof tray.

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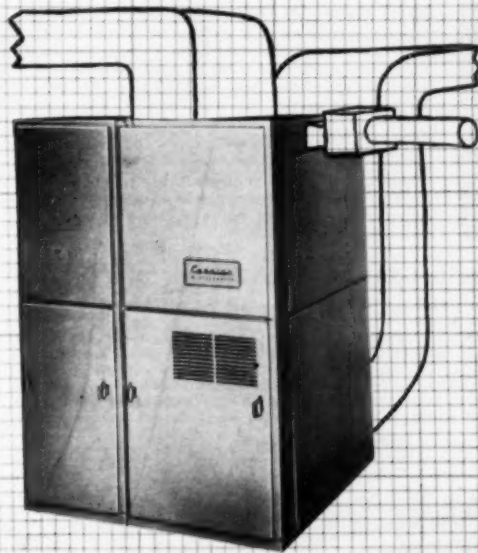
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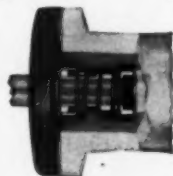
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# Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

## Automatic Defrosting (II)

The interest in a subject can be rather accurately gauged by the amount of correspondence that the author receives from the readers. It is disappointing to him to get no letters, for this seems to indicate a general apathy on the part of the readers toward the subject or the manner in which it was presented.

On the other hand, if his mail is heavy, he knows that at least the column is being read, even though some may disagree.

Based on these standards, the series of articles on "Automatic Defrosting" must have touched a live nerve, judging from the amount of mail. As usual, some of the correspondents had questions on specific points or on some installation of their own.

And some of the correspondents voiced disagreement with some of the author's statements. One of these concerned the article that appeared in the April 28 issue on the use of the re-evaporator in the suction line on hot-gas defrost systems.

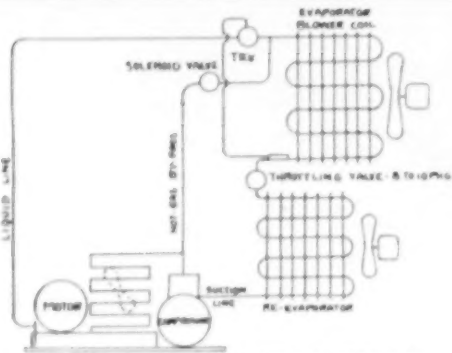


Fig. 1—Hot-gas defrost system with re-evaporator in suction line at all times.

COURTESY: ISUM MFG. CO.

Readers will recall that the re-evaporator serves two excellent purposes on hot-gas defrost systems:

1. It takes heat from the air and adds this to the heat of compression. This "supplementary" heat from the re-evaporator keeps hot-gas defrosting effective, and prevents the system from "running out" of heat, as a hot-gas defrost system does that is not supplied with supplementary heat.

2. It evaporates the liquid that has condensed in the evaporator before

this liquid gets back to the compressor, and thus prevents liquid-slugging by the compressor at the start of the refrigeration cycle, immediately following the defrost cycle.

The diagram accompanying the April 28 article showed the re-evaporator in the suction line, and at the inlet of the re-evaporator, a throttling valve that operates similar to an automatic expansion valve. The purpose of this throttling valve is to feed any liquid coming back from

the evaporator, into the re-evaporator only as fast as the re-evaporator can evaporate it, and to prevent overloading the compressor and the motor driving the compressor.

Also shown was a by-pass line around the evaporator, and in this by-pass was an electric solenoid valve. With this solenoid valve closed, as during the defrost cycle, the refrigerant from the evaporator must pass through the re-evaporator to get to the compressor.

It was stated that, with this solenoid valve open, as during the normal refrigeration cycle, the refrigerant uses the by-pass line to the compressor, because the by-pass line is an easier path to the compressor, and has less restriction and pressure drop than the path through the re-evaporator and the throttling valve at the inlet of the re-evaporator.

The article also stated that this was an advantage over leaving the re-evaporator and throttling valve in the suction line at all times—that is, during both the defrosting and normal refrigeration cycles.

### CAPACITY LOSS FROM SUPERHEATING

This is the point to which our friend (and the letter was written by a good friend of the author) objected. Although agreeing that passing the refrigerant from the evaporator through the re-evaporator does give increased superheat to the refrigerant during the normal refrigeration cycle, he feels that the increase in the amount of superheating is very small, and the reduction of compressor capacity because of the increased superheat is negligible.

He contends that if the re-evaporator is properly designed, and as it would be if it were made by any of the reputable manufacturers of such equipment, the pressure drop through the re-evaporator during the normal refrigeration cycle will be negligible.

Furthermore, my friend cites what he feels are advantages in leaving the re-evaporator and the pressure reducing valve in the suction line during the normal refrigeration cycle as well as during the hot-gas defrost:

- (1) Simplification of the system;
- (2) Insurance against liquid-slugging by the compressor at any time, due to erratic operation of the expansion valve (not necessarily attributed to the valve itself), bulb in too warm a location, etc.;
- (3) Elimination of the suction line solenoid valve, with the attendant

possibility of the solenoid valve itself causing some pressure drop.

### MANY SUCCESSFUL INSTALLATIONS

As proof, he cites the hundreds of installations in successful use that are connected in this manner.

In truth, there is considerable merit to these contentions. The loss of capacity and efficiency due to superheat can easily be overemphasized. It is usually considered standard on commercial low-pressure equipment ("Freon-12," methyl chloride, etc.) for the suction gas to be superheated to 65° when it enters the compressor. Superheating it to 80° should make little actual difference in the compressor capacity.

One compressor manufacturer's tests showed a loss of about 2% due to superheating to 80° instead of 65°. The "Freon-12" tables show a loss of density of less than 3% for 0° saturated suction vapor superheated to 80° instead of 65°, which checks with the manufacturer's test.

If the solenoid valve by-passing the re-evaporator and throttling valve is properly sized, the pressure drop through it can be disregarded. It will be more difficult to obtain a negligible pressure drop through a re-evaporator-throttling valve combination, for the pressure drop through the throttling valve is apt to be more than through the suction line solenoid valve.

Suction line pressure drop on a low temperature installation can be quite damaging to compressor capacity and efficiency. If the pressure drop through the re-evaporator-throttling valve combination can be held to less than 1 p.s.i. on a 0° evaporator, the effect will not be too serious.

Since a diagram of the method using a suction line solenoid valve by-passing the re-evaporator and throttling valve was shown in the April 28 issue, in all fairness the other method that eliminates the suction line solenoid by-pass and which leaves the re-evaporator and throttling valve in the suction line during the refrigeration cycle, as well as the hot-gas defrost cycle, is shown in Fig. 1.

The statements made in the April 28 issue were literally and strictly true, but the author does not wish the inference to be drawn that the method of leaving the re-evaporator in the suction line at all times is to be condemned, if the equipment is properly designed and applied.

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## NARDA Meeting Program--

(Concluded from Page 1, Column 3) confidence, plan long-range merchandising programs, and will tend to create less diversified inventories," Mort Farr, NARDA president.

Registration fee for the entire affair, including a cocktail reception in the West Room Sunday evening, two breakfast and luncheon sessions in the Crystal Room, two morning and a Tuesday afternoon session in the Louis XVI Room, Monday afternoon round table meetings and tour of educational exhibits in the Grey Room, and a banquet in the Bal Tabarin will be \$24.50.

### TO DISCUSS FUNDAMENTALS

Ed J. Hegarty, director of sales training for Westinghouse, will discuss "Brush Up Your Fundamentals" at the Monday breakfast session.

Participants in the morning program will be William Murray of Paoli, Pa., discussing "Range Demonstration," Harry Swan of E. C. Minas Co., Hammond, Ind., on "Traffic Building," S. E. Wolkenheim, marketing director, A. O. Smith Corp., on "Water Heater Promotion," Gross Williams, Shreveport Refrigeration Co., Shreveport, La., on "White Goods Servicing," and Wallace Johnston, Wallace Johnston Appliances, Memphis, on "Servicing Traffic Appliances."

Paul Galvin, president, Motorola, will be the Monday luncheon speaker, describing television "As It Looks To Me."

### NARDA PROGRAM TO BE OUTLINED

NARDA's managing director, A. W. Bernsohn, will outline the association activities scheduled for the second half of 1952 at the Tuesday breakfast session and a brief business meeting will be held then.

Hal L. Biddle, general sales manager, Ironite, will be the lead-off speaker at the Tuesday morning session, discussing "Selling Ironers With Demonstration." Harold Sampson of Samson Enterprises, Milwaukee, will talk on "The Manufacturer's and Distributor's Role in Retailing."

William S. Hake of Nelson's of Jamestown, Jamestown, N. Y., will analyze "Sales Projection." Carl Hagstrom, General Appliance Co., San Francisco, will describe the procedures and principles of the food plan program for selling freezers. Final morning speaker will be C. R. McLean, manager of sales, Automatic Blanket Department, General Electric, on "How to Sell Electric Blankets."

Luncheon speaker Tuesday will be Dr. Alfred P. Haake, lecturer, economist, and consultant to General Motors.

"Dealer Growth and Profit Build-

ing" will be the subject of H. B. Price, Jr., vice president of NARDA, Tuesday afternoon.

P. H. Leslie, television sales manager, General Electric, will be the principal speaker on Tuesday's television session, describing "How to Sell Television."

"What the Dealer Can Do to Preserve Sports Programming" will be discussed by Dan D. Halpin, chairman, RTMA Sports Sub-Committee on Promotion, and manager, television receiver sales, RCA Victor Home Instrument Dept.

At the close of the Tuesday afternoon meeting the dealers will participate in an open forum discussion on topics of their own choosing. Then, in the evening, the banquet will be held with professional entertainment.

## 'Hardship' Firms Can Now File for Third-Quarter Supplemental Allotments

WASHINGTON, D. C. — Small manufacturers now may file applications for third-quarter supplemental allotments of controlled materials from the Small Business Hardship Account, the National Production Authority has announced.

Firms which meet the criteria for such assistance should submit their requests immediately to either the field offices of the Department of Commerce, or the NPA, Washington 25, D. C., whichever made the most recent allotment of materials.

These criteria are as follows:

1. The firm must be classified as a small business.
2. The firm primarily must be producing civilian-type products—that is, having more than 50% of its value of actual production or shipment in the most recent quarter in products classified as civilian-type.
3. The firm is unable to maintain a minimum production and supervisory staff because it has received insufficient allotments of controlled materials for the calendar quarter for which the hardship application is being submitted.
4. The firm is unable to continue normal production by using substitute materials.

A guide sheet for applicants is available at any Department of Commerce field office, or from the NPA in Washington, D. C. NPA Administrator Henry H. Fowler announced. He emphasized that firms which do not qualify for assistance from the Small Business Hardship Account may apply for additional materials under other forms of relief which the CMP system provides.

## NARGUS Convention--

(Concluded from Page 1, Column 4) at 1:30 p.m. on June 22. In addition to reports and addresses, there will be several panel presentations and clinic sessions.

Panel presentations will cover these subjects: "My Most Profitable Promotion," "There's Plenty of Room for Small Stores," "Profitable Side-lines," "How I Grew Up," "Profitable Produce Department Operation," "Building Volume in the Meat Department," "Personnel Makes the Difference," and "Reducing Food Store Operating Costs."

Clinics will be devoted to "Productive Advertising," "Food Store Modernization and Expansion," "Loss Leader Selling," "Pillager Control," and "Service Store Operations."

Among the many entertainment features of the convention will be sightseeing boat tours on Tuesday and Thursday afternoons and the President's Party in the Dade County Auditorium Sunday evening. The latter will feature Phil Spitalny and the "Hour of Charm" orchestra.

Also planned is a special post-convention trip to Havana. Those taking this tour will leave from Miami on the S. S. Florida at 6 p.m. June 27 and return July 2. In Havana, an official adjourned convention session will be held in the Hotel Nacional.

### E. E. Steinhorst Dies at 56

UTICA, N. Y. — Edward E. Steinhorst, 56, vice president of Emil Steinhorst & Sons, Inc., manufacturer of refrigeration equipment, died in his home May 4 after a brief illness. His wife, a son, and a daughter survive.

## Matheson Named Pres. Of Portable Elevator

BLOOMINGTON, Ill. — William A. Matheson has been named president and general manager of Portable Elevator Mfg. Co. here, according to Roland S. Read, board chairman.

Matheson was formerly general manager and later president of Williams Oil-O-Matic in Bloomington. Upon consolidation of the Eureka and Williams corporations, he became the executive vice president in charge of the Williams division.

Later, Matheson left Eureka-Williams to open his own offices as a marketing consultant. More recently, he was a vice president of American Bldg. Corp.

## Morrison Steel Products Promotes Farrar, Fanning

BUFFALO — Appointment of John K. Farrar as sales manager of the "Mor-Sun" Furnace Div. of Morrison Steel Products, Inc. here was announced recently.

At the same time, Isadore Morrison, vice president in charge of operations, announced the promotion of Ray W. Fanning to production manager of the company.

Farrar has been acting sales manager since Feb. 12. Previously, he was assistant sales manager.

Fanning, who was with Trico Products Corp. from 1934 to 1939, resigning as control manager, has held the same post with Morrison.

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### VOLUME 2

Condensers; Compressor Shaft Seals; Defrosting Evaporators; Compressor Oil; Charging Refrigerant; Humidity and Air Circulation; Carbon Dioxide; Use of Gauges; Trouble-Shooting; Preventive Maintenance; Control of Moisture; Leaks; Care of V-Belts; Lapping Seals, Plates; Service Charts.

### VOLUME 3

Last Time and Short Cuts; Refrigerants and Tables; Mollier Chart; Two and Three Stage Compression; Leaks and Moisture; Electric Currents; Single and Three Phase Systems; Motor Troubles; etc.

### VOLUME 4

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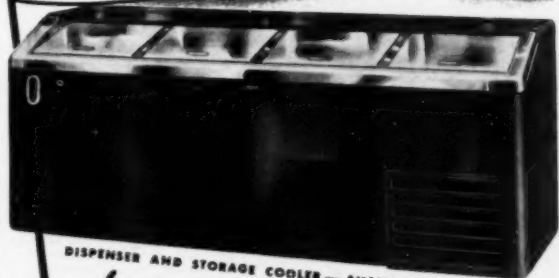
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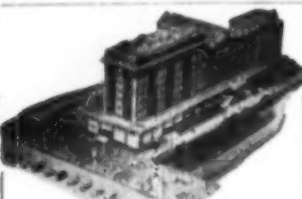
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## PATENTS

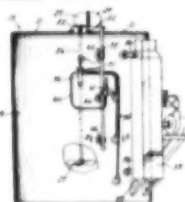
Week of April 29  
(Continued)

2,594,502. LIQUID COOLER AND EVAPORATOR COIL THEREFOR. Lester J. Saxe, Hamburg, N. Y., assignor to Fedders-Quigan Corp., Buffalo, N. Y.



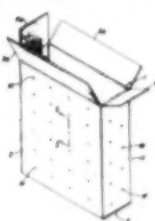
1. A liquid cooling coil comprising a helix formed of tubing wound into a series of convolutions, inlet and outlet lines of less diameter than said tubing sealed into the ends of the helix, a second tube of less diameter than the helix tubing sealed into the outlet end thereof, said second tube having an internal diameter sufficient to provide a bulb well for the power element of a refrigerant control device, said second tube having a sealed inner end, a spacer member disposed between the second tube and the internal wall of the helix tubing to position the second tube adjacent the axis of the helix tubing and enable liquid to flow around the entire surface of the said second tube, and a refrigerant coil bonded to the external surface of the helix tubing and disposed at substantially diametrical regions thereof along the convolutions, said refrigerant coil having portions overlying at least a portion of said second tube, the convolutions of the helix being spaced.

2,594,603. REFRIGERATED LIQUID STORAGE TANK. Frank J. Samboni, Myones, Calif.



1. A refrigerated liquid storage tank comprising inner and outer walls, a refrigerant pipe of considerable length and of relatively small cross sectional area wrapped around said inner wall and serving as a spacer for said outer wall, said pipe cooperating with said inner and outer walls to define a continuous passage from one extremity of said tank to the other, a liquid filling said passage and means for circulating said liquid through said passage to effect the maximum transfer of heat from said inner wall to the refrigerant in said pipe, said pipe being plugged at intervals along its length to form a plurality of short sections, each of which is separate from its adjoining sections, and each section having its own liquid and suction lines.

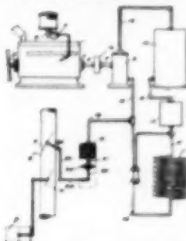
2,594,572. PACKAGED REFRIGERANT. William E. Moore, Oakland, Calif.



1. A disposable refrigerating unit comprising: a rectangular cardboard container; a body of finely divided material disposed in said container; inwardly opening check valves formed in the side walls of said container; said check valves permitting ingress of water into said container and preventing the egress of said finely divided material from said container.

### ABSTRACTS

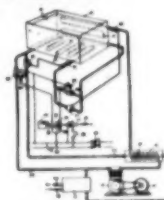
134,694. REFRIGERATION UNIT. Melvin E. Griffing, Bridgehampton, N. Y.



This apparatus pertains to a control system for a refrigeration system driven by an internal combustion engine.

The apparatus consists of an internal combustion engine 1, with carburetor 2, starter pulley 3, magneto 4 and shaft 5 driving compressor 9 through centrifugal clutch or other speed responsive mechanism 18 and shaft 17. Butterfly valve 7 in the intake manifold 6 is controlled by operating conditions of the refrigeration system. Butterfly valve 8 and governor control 8' of conventional design control the maximum speed of the engine. Conduit 12 delivers compressed gas from compressor 9 to condenser 10, from thence condensed refrigerant goes to evaporator 11 through pipe 14, receiver 13, an expansion valve and pipe 15. Suction pipe 16 leading back to the compressor has connected thereto by conduit 18 a pressure responsive bellows 19 which in turn operates a snap-action device 20 by push rod 21. Through linkage 22-25 butterfly valve 7 is operated. High pressure in such suction pipe 16, which accompanies starting of heavy load, will cause bellows 19 to expand and through snap acting mechanism 20 move valve 7 wide open. Decrease in pressure accompanying light or no load conditions will cause 19 to contract, and snap 7 to closing position. The arrangement of clutch device 18 is such that the shafts 5 and 17 are disconnected at speeds just under full load speed of the particular engine r.p.m., and connected just above full load speed. The engine is disconnected when the throttle is moved to its idling speed and stalling of the engine is prevented. When the throttle is moved to its open position, the shafts are not connected until the engine has gained momentum.

151,974. REFRIGERATING SYSTEM. Wayne E. Deane, Caldwell, N. J., assignor to General Electric Co.



This application discloses an ice making machine of the type wherein small pieces of ice are frozen within a tank of water 11 and are periodically released by heating, thereby allowing them to float to the surface for removal. The refrigerating system includes the usual compressor 13, condenser 15 and heat exchanger 16. The condenser is cooled by water entering through 23 and leaving through 24. A first evaporator 12 is fed by liquid line 22 arranged in heat exchange relationship with one portion of the tank, for instance the bottom, and a second evaporator 17 arranged in heat exchange relationship with another portion of the tank, such as a side wall. Means is provided to connect the evaporators normally in series in a closed refrigerant circuit with the compressor and condenser so that the second evaporator 17 receives refrigerant from the first evaporator 12. A first thermostatic expansion valve 18 with a thermal bulb 19 controls the operation of the first evaporator 12, and a second valve 27 with thermal bulb 26 controls that of the second evaporator 17. A normally open solenoid valve 20 directs refrigerant from the first to the second evaporator around thermostatic valve 27. This valve is energized by coil 29 connected across line 32 in which blade 34 when bar 36 is maintained in the right hand position by spring 35. Under this condition the second evaporator acts as a superheater. A conduit 25 is provided to by-pass the condenser and the first expansion valve for providing communication between the output of the compressor and the first evaporator, with a normally closed solenoid valve 30 when switch blade 29 on bar 36 is moved to the left by operation of manual switch 38 and coil 37. Through this conduit 25 hot refrigerant is supplied to the first evaporator 12 and releases the ice against the evaporator, the second evaporator 17 and expansion valve 27 being rendered operative to utilize heat of the water in the tank to vaporize refrigerant liquefied in the first evaporator.

Whenever main switch 33 is closed, the valve 29 is held open because the spring 35 keeps blade 34 in its right hand position.

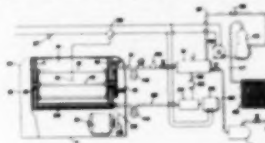
The valve 20 is preferably maintained closed long enough to vaporize any slugs of liquid which may remain in coil 17. To insure this, dashpot 40 is provided to insure a slow return of bar 36 to its right hand position after deenergization of coil 37.

Week of May 6

2,595,599. REFRIGERATED DOUGH MIXER. Alonso W. Bass, York, Pa., assignor to Read Standard Corp.

1. In a dough mixer, a mixing recep-

table, said receptacle being defined by a wall, means for cooling said wall comprising a refrigerant chamber in direct heat transfer relation to said wall, said



chamber forming a part of the liquid line of a flooded expansion refrigerating system, means for maintaining refrigerant in said chamber at a pressure above that at which it would boil, and thermal control means responsive to a predetermined refrigerant temperature for effecting operation of said refrigerating system.

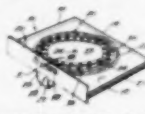
2,595,445. DEHYDRATOR STRUCTURE. Edward W. Bottom, Detroit, Mich.



1. Refrigerating apparatus comprising a dehydrator located in the refrigerant circulating system, said dehydrator comprising an elongated casing having inlet and outlet openings at opposite ends thereof, an elongated tubular foraminous member disposed axially within said casing, said member having an open end in communication with said inlet opening and a closed end of foraminous material opposite its open end, the length of said member being substantially less than the length of said casing so that the closed end of said member is spaced substantially from the outlet end of said casing, the diameter of said member being substantially less than the diameter of said casing so that the sides of said member are spaced substantially from the sides of said casing, a helically twisted flat deflector strip in said member having a width substantially equal to the diameter of said member and extending substantially from end to end thereof, the deflector strip having concave-convex embossments disposed along the ends thereof to break up smooth flow of fluid along said strip to thereby increase lateral deflection of fluid, the interior of said member being free of obstructions other than said deflector strip to provide for free flow of refrigerant in a helical path providing for centrifugal deflection of refrigerant laterally of said member, the entire space between the interior of said casing and the exterior of said member being filled with a moisture absorbing material.

2,595,456. COMBINATION DRIP TRAY AND ICE CUBE STORAGE AND DIS-

PENSING DEVICE. Lester H. Kinkel, Evansville, Ind., assignor to International Harvester Co.



1. A drawer-like device of the class described, comprising: a container having a bottom with upstanding side, end and front walls secured thereto and having the top open; the front wall of said container being fashioned with an opening therein; a circumferentially extending shelf within said container; said shelf being fashioned with an opening therethrough which is arranged to register with said front wall opening to provide a chute-like passage from the inside to the outside of said container; a circular grid member pivotally mounted in said container in spaced relation to said shelf; said grid member being fashioned so as to provide a plurality of open-ended cells adaptable for receiving individual ice cubes therein; and having said grid member disposed so that each cell therein may be rotatably brought into registration with the opening in said shelf whereby an ice cube positioned in the cell may be released and discharged through said opening.

2,595,472. HEAT EXCHANGER. Lester U. Larkin, Harvey, Ill., assignor to Lincoln M. Larkin, Libertyville, Ill.



2. A heat exchanger comprising a sheet metal body forming enclosing walls, sheet metal strip having side walls and an integral top wall disposed helically upon and secured to said enclosing walls to form a fluid passage between said enclosing walls and said strip, the edges of the side walls of said strip being sealed directly to the enclosing walls of the body, the top wall of said strip being formed with transverse corrugations, to promote turbulence in liquid refrigerant flowing in the passage.

(To Be Continued)

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### POSITIONS AVAILABLE

SALES ENGINEER—Established west coast manufacturer of commercial refrigeration requires experienced sales engineer to head heat exchange division. High potential, good working conditions. Position with corporation. BOX 4014. Air Conditioning & Refrigeration News.

REPRESENTATIVE WANTED: Large Midwest manufacturer of refrigeration and industrial controls desires representatives in the New York and Boston areas. Excellent opportunity for men who can sell to jobber organizations and original equipment manufacturers. Reply BOX 4019. Air Conditioning & Refrigeration News.

CARRIER DISTRIBUTOR needed: service manager. Must have ability to trouble shoot, supervise, and direct construction and service men. Prefer settled middle aged man with previous experience on Carrier equipment. Will offer good hourly wages with overtime or salary plus commission. Good working conditions. Answers confidential. BOX 4023. Air Conditioning & Refrigeration News.

POSITION OPEN for an experienced service man on the southwest side of Chicago. Prefer one with experience on household, commercial refrigeration and air conditioning. Will pay highest rate to a good man and guarantee 40 hrs. or more per week. BOX 4023. Air Conditioning & Refrigeration News.

SALES REPRESENTATIVES wanted—nationally known manufacturer selling to dairy and ice cream industry. Number of territories now open. Prefer men previously associated in this industry or who have refrigeration sales background. Excellent opportunities. Write fully. State experience, age, territories covered and references. BOX 4026. Air Conditioning & Refrigeration News.

MAJOR MANUFACTURER with district sales office in Houston, Texas, seeks the services of a sales manager qualified

to assume responsibility of district operations. Must have some knowledge of mechanical refrigeration. Please state your qualifications in your first letter, with a picture if possible. All replies will be held in strict confidence until such time as an interview can be arranged. Write BOX 4027. Air Conditioning & Refrigeration News.

### EQUIPMENT WANTED

WANTED: TRADE-INS for export. We are buying trade-in refrigerators as-is, sealed units, 1940 and later models, 5½ cu. ft. and larger, all makes in any quantity. Please give us the quantity, make, model, size and year with your offer. AMERICAN ISRAELI MFG. CORP., 330 Seventh Avenue, New York 1, N. Y.

### EQUIPMENT FOR SALE

REFRIGERATOR DOORS, 36" by 66" double batten auto close doors complete with removable track heads for a 72" track, 1½" corkboard insulation, 16 gauge metal clad. Brand new, \$56.00 each. Freight prepaid in U. S. Door height will be altered for anything up to 11 ft. 2 in. track for \$15.00 additional. BIMEC CO., Cincinnati, Ohio.

FOR SALE—80 ton cooling equipment as follows: with magnetic starters and automatic controls: 2 Frick 4 cylinder Frann compressors 4½ x 4½ Model F.W. 440; 2 40 H.P.—208 volt—3 phase—60 cycle 1750 R.P.M. motors; 3 Aero fin coils, 4 pipes deep, 18 pipes high 8½ x 26", 1 80 ton Buffalo 42 delivery 20, 600 C.F.M.; 3 new American coils model 20300. BOVAL, REALTY CO., 312 38th Street, Union City, New Jersey

\$52 BUYS standard brand ¼-HP open type or sealed type complete units. Other sizes up to 3 HP. Write for complete listings on units and parts, including Kilzon overload relays 6¢ 1¢. MANN REFRIGERATION SUPPLY CO., 440 Lafayette Street, New York 2, N. Y.

SACRIFICING MODEL FDS18A 18 cu. ft. display freezer with superstructure and Thermopane glass sliding door. Only \$340 each, f.o.b. New York. List price \$714. For complete details, write or call MANN REFRIGERATION SUPPLY CO., 440 Lafayette St., New York, Gramercy 3-8000.

ATTENTION SERVICEMEN—Send for our new catalog—on controls, relays, brazing fittings, V belts, valves and open type units. All new merchandise at great savings up to 50%; sold on money back guarantee. WALTER W. STARR REFRIGERATION, 2833 Lincoln Ave., Chicago 13, Illinois.

### MISCELLANEOUS

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## Texas Dealers' Clinic Hears

Learn Appliances To Stress In Your Area;  
Good Distributor, Serviceman Are Big Asset

FORT WORTH, Texas, May 28—Retailers of appliances seeking their full share of their markets will learn balanced selling, Harry Kelley, appliance sales manager, Frigidaire Div., General Motors, told 175 retailers attending the Texas Appliance and Television Dealers' One-Day Clinic at the Worth hotel here.

With refrigerators in 1952 at a selling rate of between 3 and 4 million units in contrast to the 6½ million of 1950, it's important for the retailer to study the rate of balance of appliance sales, for example, 1951's 36 electric ranges, 46 automatic washers and 16 food freezers per 100 refrigerators, and to place sales emphasis accordingly.

Kelley pointed out that five major appliances which were not commercially available or had little acceptance in 1940 now represent an annual volume of nearly \$900 million, more than the total appliance volume of 1940. In turn, he noted that there were 80,000 dealers in 1951, and only 39,000 in 1940.

## WHAT PROFIT ON TRADE-INS?

He urged the dealers to recognize trade-ins not as a "problem" but as a basic part of the business to be handled at a profit of 25 to 33½% after trade-in allowance and reconditioning are figured in the cost, and

urged the dealers to follow the factory plan books of the various manufacturers. He also suggested that outside selling be employed more extensively, that dealers sell harder in order to get their price, and that they take time to teach their employees to sell in a normal market.

"Be careful what you sell. It's going to move fast and your reputation rides on it," Fred D. Ogilby, vice president in charge of television, Philco Corp., counseled the Texans. "There's a strong possibility that, in the new areas soon to be served by the network, sales in the six months starting with the completion of the hookup will be 50% of the total sales made here to date."

## CONCENTRATE ON BRANDS

He advised shortening the number of lines handled and concentration on established brand merchandise. "A well-trained serviceman is the biggest asset you can get in your store," Ogilby suggested, pointing out that "the real successful dealers do their own installing and servicing." He reported that the average good, standard set, if installed properly and the customer is properly instructed, doesn't need more than one service call in 90 days and that the cathode ray tube life is over 3,000 hours.

"A good distributor is as interested in seeing his dealers making sales at full retail prices as he was in originally selling the merchandise to the dealer," H. B. Price, Jr., NARDA vice president and a Norfolk, Va., retailer, told the clinic, "and it is the manufacturer's responsibility and obligation to the dealer to see that his distributor is a good distributor."

"And the biggest factor in dealer failure is your thinking this is an easy way to make a living. This retail industry of ours in the last six years has possibly produced the greatest return on invested capital of any retail business in the country."

## WHAT IS DEALER RESPONSIBILITY?

In listing dealer responsibility to the industry, Price said: "The dealers first of all must bridge the gap between productive capacity and sales capacity of the industry. It is the challenge of our entire industry to sell the products it can produce."

Other obligations of the dealer are:

Maintain adequate service. Display the products represented in a clean, activated manner.

Attend distributor sales and service clinics.

Develop new markets. Push at least one low-saturation item.

Handle trade-ins intelligently.

Minimize lines. Become important to a few suppliers.

Keep within means and don't expand beyond the limits of available capital.

Plan intelligently. "Don't blame your distributor for trying to sell you; if you know your true position, he will accept a turnaround based on a factual explanation."

"The distributor justifies keeping his part of the profit dollar by rendering service which the average dealer can't afford to supply," Price said.

These include:



## DEPARTMENT OF DEFENSE

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Watertown Arsenal; Rock Island Arsenal; Springfield Armory; Watertown Arsenal, and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices. Ordnance District Offices do not have information on any other purchases.

Description	Quantity	Invitation No.	Opening Date
Signal Corps Supply Agency, Photo Cen. Office, Long Island City, New York			
COPIES OF REQUEST FOR PROPOSAL LISTED BELOW MAY BE EXAMINED BY PROSPECTIVE BIDDERS AT SIG. C. SUP. AGENCY, PHOTO CEN. OFFICE 35-11 36TH AVE., LIC 1, N.Y.			
REQUESTS FOR PROPOSALS MUST BE SENT TO THE ABOVE ADDRESS WHERE COPIES MAY BE OBTAINED TO THE EXTENT AVAILABLE.			

Services and materials necessary to furnish and install refrigeration and air conditioning system.	1 ea	(SC-96-09-52-02708-71-Q)	16 Jun 52
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Commandant of the Marine Corps, Washington, D. C. Attn: Supply Department, Procurement Section			
Refrigerators, electric self-contained, to be type 1, size 6, federal spec AA-R-211B with exceptions.	450 ea	1300B	17 Jun 52

Bureau of Ships, Washington, D. C.			
Cooling coil, type A, size 41 DW to 46 DW & size 42 DP	300	549-375Q	26 Jun 52

Unit cooler, type B, size 41 UW 21	42		
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Gravity coil size 1 G to 5 G	42		
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Air conditioning and mechanical ventilation Laredo Air Force Station, Texas	2 lots	(ENG-41-243-51-118 B)	16 Jun 52
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Two Lots, Lot 1—Portions of Approx. 7 Bldgs. are to be Air Conditioned—Work will include necessary Ceiling & Insulation Mechanical Equipment Cooling Towers—Electrical Piping & Ductwork—Lot 2—Approx. 30 Bldgs. Consisting of Kitchens—Mess Halls—Class Rooms—Barracks & Headquarters Bldgs. are to have mechanical ventilations installed—Award will be made by lot.			
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Air conditioning of office bldg. and engineering building	1 job	(ENG-41-243-52-119B)	23 Jun 52
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Michoud Ordnance Plant, New Orleans, La. The work consists of the rehab. and additions to the existing ductwork in the office building and engineering building and the installation of refrigeration machinery w/ necessary electrical piping control systems and cooling towers.			
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Purchasing & Contracting Office, March Air Force Base,			
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Maintenance of adequate stocks of merchandise.			
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Carrying sufficient quantities of replacement parts.			
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Supplying product maintenance information.			
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Having intelligent, properly trained dealer contact men who understand dealers' problems.			
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Supplying sales help and counsel, and			
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Supplying credit in keeping with the dealer's ability to pay.			
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"He must not franchise more dealers than the market potential will support.			
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"He would not think of selling in competition with his dealers—a practice commonly referred to as 'back door selling.'			
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"He would not franchise a dealer who did not have adequate capital, some understanding of the service problems and reasonable sales power to secure an economically sound volume of sales.			
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"He requires a reasonable investment on the part of his franchised dealer in service equipment and repair parts.			
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"Indifference in franchising retail outlets with no understanding of service responsibility to the customer has resulted in a stigma attached to the appliance retailers with the net result that before the war the appliance business was drifting to other types of outlets." He cited the major chains as an example.			
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Sam Hagy of the Good Housekeeping Shop, Dallas, was elected by the executive committee of the Texas group to the post of general chairman, succeeding Vergal Bourland of Fort Worth. The next meeting of the group will be held in approximately six months, probably in Houston.			
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Punxsutawney Opens New Office, Showroom In N. Y.			
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PUNXSUTAWNEY, Pa.—Opening of a New York office and showroom under the direction of J. E. Brennan Corp. has been announced by Punxsutawney Co. here. The office and showroom are located at 480 Lexington Ave., room 841.			
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Chicago ASRE Set To Hold Golf Tournament June 26			
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CHICAGO—The Chicago Section of the American Society of Refrigerating Engineers will hold its annual golf tournament at Itasca Country Club on June 26, with one of the largest turnouts in the nine years of the event expected. A steak dinner will follow the tournament. Reservations are being taken by John W. Hall, 1929 Winona St., Chicago 40, Ill.			
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## Government Contracts

California			
Furnish all plant, labor, materials and equipment (except materials to be furnished by the government) and perform all work for the installation of evaporative coolers in various buildings at March AF Base, California.	Job	04-605-52-97	16 Jun 52

Mobile District, Corps of Engineers, P.O. Box 1100, Mobile 7, Ala.			
Construction additions to cold storage and meat cutting bldgs at Ft. McClellan, Ala. and Camp Rucker, Ala.	Job	(EN-1-01-075-52-82B)	26 Jun 52

Purchasing and Contracting Office, Camp Breckinridge, Ky.			
S & M—installation of complete air conditioning unit.	Job	(36-038-52-120B)	17 Jun 52

Commanding Officer, Camp Edwards, Mass. Attn: Procurement Section, refrigeration plant			
Officer in Charge of Construction, Naval Air Station, Corpus Christi, Texas	Job	23452	17 Jun 52

Replace refrigeration equipment in Bakery Bldg. 76 NAAS, Kingsville, Texas.	Job	(QM109-030-52-66B)	24 Jun 52
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Quartermaster Purchasing Office, Atlanta General Depot, U.S. Army, Atlanta, Georgia			
Installation of Water Cooling Systems at Bldg. 800 Atlanta General Depot.	Job	52-1467 P	16 Jun 52

Chicago Quartermaster Depot, Quartermaster Purchasing Division, Chicago, Illinois			
Ranges Electric & Gas Refrigerators Frozen Food Spec. MIL-R-10141A /QMC/	160 ea	52-1670 B	16 Jun 52

GENERAL SERVICES ADMINISTRATION			
Description	Quantity	Reference No.	App. Bid Date

Business Service Center, General Services Administration, Region 3, 275 U.S. Courthouse, 219 South Clark Street, Chicago 4, Ill.			
Refrigerators, electric operated domestic, Fed. Spec. AA-R-211B.	30 ea	CHD-1029	6-16-52

Refrigerators, household type Gas and Kerosene operated. Cabinets: low temperature storage.	3 ea	CHD-1029	6-16-52
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Business Service Center, General Services Administration, Region 3, Washington 25, D. C.			
Centrifuge, Portable Refrigerated.	1 ea	2M-13975-R	6-23-52

CONTRACTS AWARDED THROUGH JUNE 6			
Bureau of Ships, Washington 25, D. C.			

Cooling Coils.—135 ea. \$121.548.—Mario Coil Co., 81, Louis, Mo.			
General Services Administration, 875 U.S. Courthouse, 219 South Clark Street, Chicago 4, Illinois			

Refrigerators, household, domestic type.—72 ea. \$14,808.—Servel, Inc., 20 Pine Street, New York 5, N. Y.			
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## THANK YOU

*McGraw-Hill*

for recently calling the attention of industry to the substantial growth of UNILECTRIC'S volume in your advertising in Business Week, Advertising Age, Advertising Agency, Printers' Ink and Sales Management, and by direct mail.

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411 South 6th St., Milwaukee 4, Wis.

\*Copies of the McGraw-Hill report are available on request. Send today for this additional evidence that UNILECTRIC WIRING SYSTEMS will reduce your product wiring costs—and improve your products.

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let GREENE quote these jobs:

STAMPINGS	Over 80 presses up to 125-ton capacity.	PAINTING	Spray and dip; air dried or baked.
ROLLED FORMS	10 machines; simple or intricate shapes.	ASSEMBLIES	Spot welded, screw fastened, etc. Screw machine sources available.
PLATING	Nickel, chrome, cadmium, brass, zinc, etc.		
POLISHING	Hand and automatic equipment.		

Put our years of prime and sub-contracting defense work experience to work for you. Write or phone today. Prompt quotations without obligation. G-12

**Greene of Racine**  
GREENE Manufacturing Company, Inc., Racine, Wis.

FOR SALE  
SURPLUS INVENTORY

Triple-glazed Thermopane units to fit 8 Ft. display cases. Size 24" x 86", panes ¼" thick. Packed six to a crate. Brand new and in original crates, never opened, below current price. Also 10 Units 22" x 62" Triple-glazed, Thermopane below current price. F.O.B. Philadelphia.

Box 4024, Air Conditioning & Refrigeration News

## WANTED ENGINEERS

Experienced household refrigerator or freezer design engineers. Unusual opportunities for advancement with a sound and growing company, located 20 miles from Cedar Rapids, Iowa, in a fine area for family living.

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for all tubing or pipe  
Handy Tube Bender

Sizes To Bend  
¾" O.D. to  
1½" O.D.



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PORTABLE  
AT LEADING SUPPLY HOUSES

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## OPS Rules on Beef Tie-In Sales--

(Concluded from Page 1, Column 2)  
tion between the retailer and the appliance vendor is not a sale of beef and is not subject to the provisions of CPR 25 Revised.

For those who do not fall in this fortunate class, here is the text of the OPS Interpretation:

1. Sales must be separate. Any arrangement, agreement, contract, understanding, or other device between any persons, which requires a buyer to purchase a freezer or other appliance in order to purchase any beef item at retail, is a violation of sections 13 (a) and 13 (b) (6) of CPR 25 Revised. Purchases of freezers or other appliances and purchases of beef at retail must be separate and clearly distinguishable transactions. There must be an independent offer and acceptance for each transaction, and purchasers of either commodity must have a free choice as to whether or not they will buy the other commodity.

2. Offers may not be restrictive. Not only the sale but also the offer to sell a beef item at retail upon condition of the purchase of any other commodity or service is a violation of sections 13 (a) and 13 (b) (6) of CPR 25 Revised. The offer to sell a beef item exclusively to buyers of appliances is equivalent to forcing would-be purchasers of beef items to buy the appliances. This practice is a restriction of the sale of beef items to the buyers of the appliances only, and is therefore prohibited. Anyone wishing to sell beef items to appliance buyers must offer such items to the general retail trade.

3. Separate billing. Section 8 (b) of CPR 25 Revised, provides that on every sale of 25 pounds or more, of beef at retail made in connection with the sale of refrigeration equipment, or any other appliance, a document must be given to the purchaser, listing the names of all beef cuts sold, together with the cost per pound and all charges for each cut. These facts must be shown on that document in such a manner that the costs and charges for the beef cuts can be clearly distinguished from the costs and charges for other commodities, and can be identified as relating only to the sale of beef cuts.

4. Overcharges to cover financing not permitted. Section 13 (b) (10) of CPR 25 Revised, prohibits charging or receiving any consideration for any service (in connection with the sale of beef at retail) for which a ceiling price has not been provided in the regulation. Financing the purchase of beef at retail is a "service" in connection with a sale within the meaning of this section, and no ceiling price has been provided in the regulation for financing service. Therefore, the seller may not make any charge for any financing service in connection with the purchase of a beef item at retail, in the form of interest or otherwise, if the addition of this charge to the price charged for the beef item will cause the total charges to exceed the regulation's ceiling price for the beef item.

Such an excess charge is also a violation of the regulation if made by an affiliate, subsidiary, principal or agent of the seller of beef.

This interpretation does not prohibit the retail sale or purchase of beef items on credit. It prohibits only the taking of any consideration for providing such credit in excess of CPR 25 Revised, ceilings.

5. Limitation on sale of wholesale cuts. Many of the combination plans apparently include the sale to consumers of sides or quarters of beef. Attention is called to section 13 (b) (3) of CPR 25 Revised, which prohibits the sale of wholesale beef cuts for which retail prices have not been set in section 40 of the regulation, except as provided in section 13 (c). While this interpretation does not purport to summarize section 13 (b) (3), it is appropriate to state here that only the following wholesale beef cuts may be sold to consumers by retailers not covered by section 13 (c): Round, sirloin, short loin, trimmed loin, rib, flank, regular chuck, short plate, brisket, and fore shank. All such cuts must conform to the cutting definitions of CPR 25 Revised. Carcasses, sides, hindquarters and forequarters may be sold at retail only by sellers qualifying under section 13 (c). It is also noted that any charge in connection with the permitted sale of wholesale cuts, which results in an overcharge, is a violation of sections 13 (a) and 13 (b) (10) thereof, except as provided in section 13 (c). Among the charges prohibited thereby are wrapping, cutting, packaging, processing, and similar charges.

6. Sales of beef by appliance vendors. Any vendor of appliances who sells beef items to a consumer, who bills a consumer for beef items on his own account, or who receives a consideration for a sale of beef items to a consumer, is a seller of beef at retail and is subject to the provisions of CPR 25 Revised. As such he must keep the records and make the reports required of such sellers by sections 11 and 12 of the regulation. For the purposes of this regulation he must determine his store group according to Article III. A store which sells only appliances and food is not a store selling general merchandise under this regulation, and its group may not be determined under section 13 (a).

7. Sales of beef to appliance vendors. A sale of a beef item to an appliance vendor by a retailer for resale is not a sale to a consumer, but a sale to another retailer for resale. Therefore in such a transaction both the seller and the buyer must comply with the provisions of section 28 of CPR 25 Revised. This section, among other things, prohibits the sale of wholesale cuts by one retailer to another.

Under section 3 (b) of CPR 24, prefabricated retail cuts may be sold to a retailer at wholesale only if the conditions stated in section 11 (b) of that regulation are complied with. The sale of fabricated cuts (cuts usually sold to eating places) to domestic retailers is prohibited by section 3 (b) (3) of that regulation.

Any transaction in which a retailer of beef (a) transfers title to a beef item to an appliance vendor, or (b) receives a consideration from an appliance vendor for the sale, transfer, or delivery of a beef item to any person, is a sale of a beef item by the retailer to the appliance vendor. However, where an appliance vendor acts as an agent for collection or payment only, in connection with a sale of beef at retail, the transaction between the retailer and the appliance vendor is not a sale of beef and is not subject to the provisions of CPR 25 Revised.

## Gas Utilities Add 1,514,000 House-Heating Customers

NEW YORK CITY—A total of 1,514,000 new gas house-heating customers were added by the gas utility industry during the 1951-52 heating season, according to the American Gas Association.

The association estimated that another 1,079,000 customers would be added in the 1952-53 season. It compared these figures with 1,014,000 gas house-heating installations in the 1950-51 season.

Projecting its estimates, the association predicted the industry would add about 1,084,000 new customers in the 1953-54 season and around 1,057,000 in the 1954-55 season.

## G-E States Stand on Freezer-Food Plans--

(Concluded from Page 1, Column 3)  
food outlets have always favored such merchandising.

"We believe that the arithmetic of the food plan over a yearly period of time rather than a day-to-day basis, taking advantage of specials and the seasonal fluctuation of perishable foods, effects economies that more than justify the purchase of a food freezer.

"We also believe that these economies in buying as well as those effected by a new system of living with a food freezer may definitely pay for a food freezer in the period stated in the arithmetic—generally about two years; the results, of course, depending upon the careful budgeting of the family involved."

In the meantime, freezer-food activity continued strong in many areas. In Philadelphia, Snellenburg's department store was conducting a series of "Amana Food Budget" clinics in its second floor auditorium. The store is the first in the country to promote this clinic, according to Newton B. Misell, sales manager, Blue Div., Peirce-Phelps, Inc., Amana distributor.

Held on a Monday evening, the first clinic was attended by 50 persons attracted by newspaper advertising. As a result, two Amana budget plans were sold and nine good prospects secured, Misell further stated.

A coupon in an ad announcing the second clinic brought in 60 responses within 48 hours of the ad's appearance, he reported. This coupon enabled the reader to obtain "more information on how I can make substantial savings on my weekly food

budget with the Amana Food Bank Budget."

Each person attending the clinics was given a brochure. The folder contained literature on Amana freezers, a mimeographed sheet describing the services offered by the Penn-Branch of New Jersey Frozen Food Lockers, Inc., Doylestown, Pa., the food supplier, and other information.

Among other things, the sheet pointed out that food financing is available through Penn-Branch for any food order in excess of \$125 and that free delivery will be made on any order in excess of \$50. Snellenburg's folder noted that the store offers no down payment and up to 36 months to pay for freezers.

## Frosted Meat Dept. Made Major Div. of Armour

CHICAGO—Establishment of a separate frosted meat division under the management of D. B. Love has been announced by Armour & Co.

Formerly a department of a major division, the frosted meat operation is now a major division itself. The company said the change was made because of the growth of the operation and the trend to frozen meat.

Love was previously sales manager of the frosted meat department and later manager of the veal department. He will be assisted by C. V. Olmstead, who has been manager of the frosted meats department.

Both consumer and institutional frozen meats are carried by the Armour company.

## Know About ROOF COOLING

by evaporation of water  
(latest development in refrigeration)

For free information send your address to:

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## New Income-Booster...



## ...The Viking ALL-PURPOSE Self-Contained DISPLAY CASE

**NOW...** a complete self-service department in just one refrigerated case! Your customers can use the new Viking All-Purpose Case to display any combination of these products at the same time: vegetables, fruits, dairy products, delicatessen items, bottled goods, smoked meats. Viking Dew Mist Control allows positive moisture control.

Porcelain front and top, gleaming stainless steel trim. 8' and 10' lengths. Self-contained... for easier, more economical installation... convenient moving to new locations in the store. Offer your customers the profit-making case they want... the all-purpose Viking... and make more profits yourself!

**Mail Coupon TODAY**

SINCE 1904

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7500 Wilson Avenue  
Kansas City, Missouri

☐ Send me more information about Viking's new All-Purpose Case.

☐ Tell me about the availability of Viking franchises in my area.

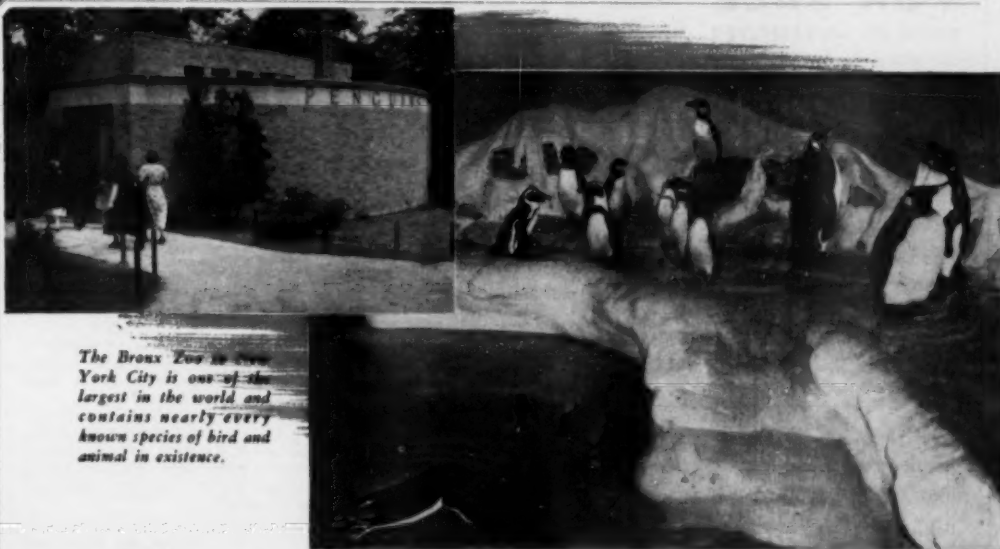
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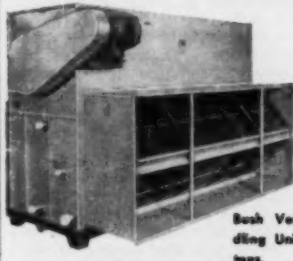
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VIKING REFRIGERATORS, INC.  
7500 Wilson Ave., Kansas City 3, Mo.



The Bronx Zoo in New York City is one of the largest in the world and contains nearly every known species of bird and animal in existence.

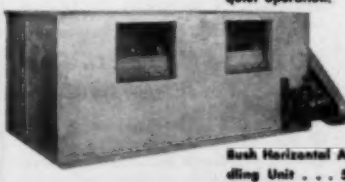
## Come on in... THE WEATHER'S FINE



Bush Vertical Air Handling Unit... 5 to 60 tons.



Bush Comfort Conditioner... smart appearance, quiet operation.



Bush Horizontal Air Handling Unit... 5 to 60 tons.

PENGUINS ARE fussy folks who like to keep cool in Summer... in fact they insist on it. A Bush Horizontal type air handling unit maintains the Bronx Zoo's new Penguin House (shown above) at a year-round temperature of 50°... makes it no longer necessary to "store" King Penguins in a refrigerator tank during warm weather.

Here again, as in countless other applications, Bush is doing a dependable, economical job... the kind of job you need and demand for your requirements. Get acquainted with the Bush Representative in your territory. He's a man worth knowing.

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